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Department of
Agriculture

FOREST
SERVICE

FOREST PLAN

Beaverhead National Forest

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PREFACE

The Forest Plan is in compliance with the National Forest Management Act of 1976 (NFMA); the regulations for National Forest Land and Resource Management Planning (36 CFR Part 219); and the National Environmental Policy Act of 1969 (NEPA), including the Record of Decision for the Environmental Impact Statement covering the Forest Plan.

Additional information about the Forest Plan can be obtained from the Forest Supervisor, Beaverhead National Forest, P.O. Box 1258, Dillon, Montana, 59725, (406) 683-3900.

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Table of Contents

Plan Reference

Introduction (Chapter I)

Purpose I-1
Management Direction I-1
Relationship to Other Documents I-1

Forest-wide Management Direction (Chapter II)

Goals II-1
Objectives II-3
    Resource/Activity Summaries II-3
    Projected Outputs and Activities by Time Periods II-13
    Research Natural Areas II-16
    Additional Data Requirements and Accomplishment Schedule II-18
Research Needs II-20
Desired Future Condition of the Forest II-21
Standards II-25

Management Area Direction (Chapter III)

Introduction III-1
Management Area 1 III-2
Management Area 2 III-5
Management Area 3 III-7
Management Area 4 III-9
Management Area 5 III-11
Management Area 6 III-13
Management Area 7 III-16
Management Area 8 III-20
Management Area 9 III-26
Management Area 10 III-31
Management Area 11 III-34
Management Area 12 III-38
Management Area 13 III-41
Management Area 14 III-44
Management Area 15 (MA 15 does not exist)
Management Area 16 III-48
Management Area 17 III-52
Management Area 18 III-55
Management Area 19 III-59
Management Area 20 III-63
Management Area 21 III-67
Management Area 22 III-70
Management Area 23 III-73
Management Area 24 III-76
Management Area 25 III-79
Management Area 26 III-82
Management Area 27 III-86
Management Area 28 III-89
Management Area 29 III-92
Management Area 30 III-96

Geographic Display Areas (Chapter IV)

Introduction IV-1

West Big Hole Planning Unit

Geographic Display Area 1A IV-5
Geographic Display Area 1B IV-7
Geographic Display Area 1C IV-9
Geographic Display Area 1D IV-11
Geographic Display Area 1E IV-13
Geographic Display Area 1F IV-15
Geographic Display Area 1G IV-17
Geographic Display Area 1H IV-19
Geographic Display Area 1I IV-21
Geographic Display Area 1J IV-23
Geographic Display Area 1K IV-25
Geographic Display Area 1L IV-27

Pioneer Planning Unit

Geographic Display Area 2A IV-30
Geographic Display Area 2B IV-32
Geographic Display Area 2C IV-34
Geographic Display Area 2D IV-36
Geographic Display Area 2E IV-38
Geographic Display Area 2F IV-40
Geographic Display Area 2G IV-42
Geographic Display Area 2H IV-44
Geographic Display Area 2I IV-46
Geographic Display Area 2J IV-48

Fleecer Planning Unit

Geographic Display Area 3A IV-51

Tobacco Root Planning Unit

Geographic Display Area 4A IV-54
Geographic Display Area 4B IV-56
Geographic Display Area 4C IV-58

Lima Planning Unit

Geographic Display Area 5A IV-61
Geographic Display Area 5B IV-63
Geographic Display Area 5C IV-65
Geographic Display Area 5D IV-67
Geographic Display Area 5E IV-69
Geographic Display Area 5F IV-71
Geographic Display Area 5G IV-73

Gravelly Planning Unit

Geographic Display Area 6A IV-76
Geographic Display Area 6B IV-78
Geographic Display Area 6C IV-80
Geographic Display Area 6D IV-82
Geographic Display Area 6E IV-84
Geographic Display Area 6F IV-86
Geographic Display Area 6G IV-88
Geographic Display Area 6H IV-90
Geographic Display Area 6I IV-92

Madison Planning Unit
    Geographic Display Area 7A IV-95
    Geographic Display Area 7B IV-97
    Geographic Display Area 7C IV-99
    Geographic Display Area 7D IV-101

The Big Hole Drainage (Chapter V)
  Introduction V-1
  Description of the Big Hole Drainage V-1
  Major Resources and Resource Uses V-2
  Management Direction V-6
    Summary of Direction V-6
    Management Area Assignments and Timber Suitablility V-7
    Harvest Schedule V-8
  Monitoring and Evaluation V-9

Implementation (Chapter VI)
  Introduction VI-1
  Influence of Past Management Direction and
    Activities on Future Management Options VI-1
  Project Planning VI-2
  Monitoring and Evaluation VI-5
  Amendment and Revision VI-8

Analysis of the Mangement Situation Summary (Chapter VII)
  Introduction VII-1
  Resource Elements VII-1

Glossary (Chapter VIII)

Appendices
  Appendix A Land Classification Summary
  Appendix B Wilderness Experience Opportunity Class Descriptions and Guidelines
  Appendix C Elk Effective Cover Calculation Process
  Appendix D Assigned Visual Quality Sensitivity Levels for Key Viewing Points and Corridors
  Appendix E Exterior Public Access Needs
  Appendix F Allowable Sale Quantity and Long-Term Sustained Yield Capacity
  Appendix G Continental Divide National Scenic Trail--Potential Trail Corridors
  Appendix H Timber Productivity Classification
  Appendix I Present and Future Forest Conditions
  Appendix J Vegetative Management Practices
  Appendix K Ten-Year Timber Sale Schedule
  Appendix L Projected Budget Required to Implement the Forest Plan
  Appendix M Procedures for Making Changes in Management Area Designations
  Appendix N Schedule of Watershed Restoration Projects
  Appendix O Criteria and Schedule for Review of Withdrawals
  Appendix P Schedule of Wildlife Habitat Improvement Projects
  Appendix Q Criteria and Schedule for Range Allotment Management Plan Completion and Implementation

Appendix R Criteria and Schedule for Range Structural and Non-structural Range Improvements
Appendix S Schedule of Trail Reconstruction Projects
Appendix T (unbound) Interagency Agreement for Management Involving Grizzly Bears in the Greater Yellowstone Ecosystem for Determining Grizzly Bear Nuisance Status and for Controlling Nuisance Grizzly Bears on National Forest Land
Appendix U (unbound) Fire Management Action Plan
Appendix V (unbound) Beaverhead National Forest Outfitter and Guide Policy
Appendix W (unbound) Soils and Water Conservation Practices Handbook (FSH 2509.22)
Appendix X (unbound) Environmental Assessment for Beaverhead National Forest Oil and Gas Leasing
Appendix Y (unbound) Southwestern Montana Interagency Visitors Map
Appendix Z (unbound) Anaconda-Pintler Wilderness Management Plan
Appendix AA (unbound) Lee Metcalf Wilderness Management Plan
Appendix BB (unbound) Recreation Opportunity Spectrum (ROS) Settings (maps)
Appendix CC (unbound) Coordinating Elk and Timber Management--Final Report of the Montana Cooperative Elk-Logging Study 1970-1985
Appendix DD (unbound) Lewis and Clark National Historic Trail Comprehesive Management Plan
Appendix EE (unbound) Beaverhead National Forest Capital Investment Program--5 year
Appendix FF (unbound) The Indian Creek Watershed Plan; Sheridan Municipal Watershed
Appendix GG (unbound) Rattlesnake Creek Municipal Watershed Plan; Dillon Municipal Watershed
Appendix HH (unbound) Continental Divide Gray Wolf Coordination Plan
Appendix II (unbound) Greater Yellowstone Ecosystem Bald Eagle Management Plan
Appendix JJ (unbound) Beaverhead National Forest Environmental Impact Statement for Control of Noxious Weeds
Appendix KK (unbound) Recreation Opportunity Spectrum (ROS) User's Guide
Appendix LL (unbound) National Forest Landscape Management - Volume II: "The Visual Management System" (the "Big Eye" Book)

Unbound appendices are available on request or can be reviewed at the Beaverhead National Forest Supervisor's Office, Dillon, Montana.

List of Tables

Projected Outputs and Activities by Time Period II-13
Research Natural Area Habitat Type Objectives II-16
Additional Data Requirements and Accomplishment Schedule II-18

Major Resources and Resource Potentials of the Big Hole Drainage V-2
Big Hole Drainage Assignments and Timber Suitablity V-7
Big Hole Drainage Ten Year Timber Management Acitivity Schedule V-8

Forest Plan Monitoring Requirements following I-8

Timber Sale Volume VII-11

List of Figures

Decision Flow Diagram Chapter VI

List of Maps

Beaverhead National Forest Vicinity Map preceding Chapter I
Geographic Display Areas (Chapter IV)
  Planning Unit and Geographic Display Area Vicinity Map IV-2
  West Big Hole Planning Unit IV-3
    Geographic Display Area 1A IV-4
    Geographic Display Area 1B IV-6
    Geographic Display Area 1C IV-8
    Geographic Display Area 1D IV-10
    Geographic Display Area 1E IV-12
    Geographic Display Area 1F IV-14
    Geographic Display Area 1G IV-16
    Geographic Display Area 1H IV-18
    Geographic Display Area 1I IV-20
    Geographic Display Area 1J IV-22
    Geographic Display Area 1K IV-24
    Geographic Display Area 1L IV-26
  Pioneer Planning Unit IV-28
    Geographic Display Area 2A IV-29
    Geographic Display Area 2B IV-31
    Geographic Display Area 2C IV-33
    Geographic Display Area 2D IV-35
    Geographic Display Area 2E IV-37
    Geographic Display Area 2F IV-49
    Geographic Display Area 2G IV-41
    Geographic Display Area 2H IV-43
    Geographic Display Area 2I IV-45

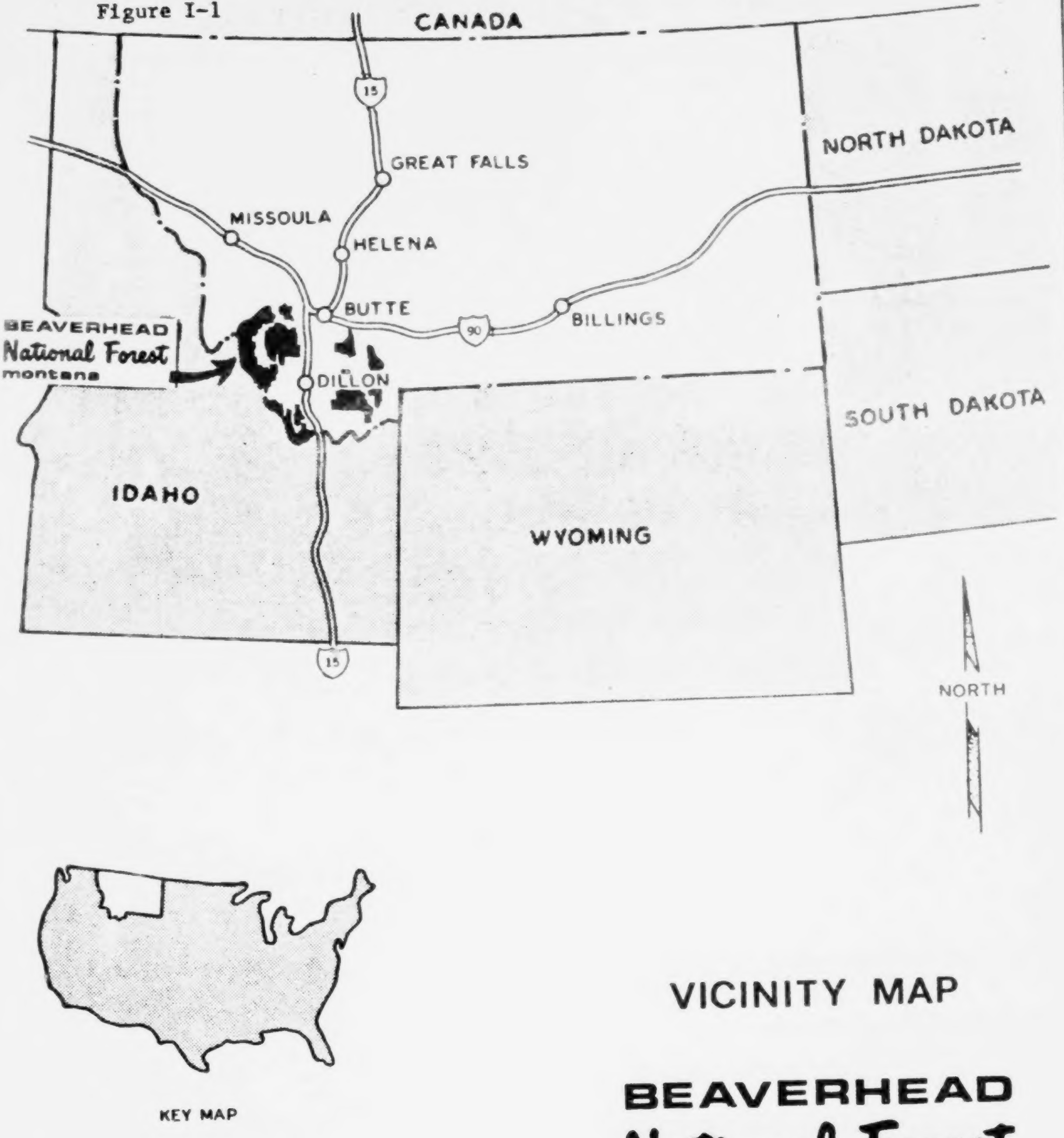
List of Tables, Figures, and Maps - 2

Geographic Display Area 2J IV-47
Fleecer Planning Unit IV-49
Geographic Display Area 3A IV-50
Tobacco Root Planning Unit IV-52
Geographic Display Area 4A IV-53
Geographic Display Area 4B IV-55
Geographic Display Area 4C IV-57
Lima Planning Unit IV-59
Geographic Display Area 5A IV-60
Geographic Display Area 5B IV-62
Geographic Display Area 5C IV-64
Geographic Display Area 5D IV-66
Geographic Display Area 5E IV-68
Geographic Display Area 5F IV-70
Geographic Display Area 5G IV-72
Gravelly Planning Unit IV-74
Geographic Display Area 6A IV-75
Geographic Display Area 6B IV-77
Geographic Display Area 6C IV-79
Geographic Display Area 6D IV-81
Geographic Display Area 6E IV-83
Geographic Display Area 6F IV-85
Geographic Display Area 6G IV-87
Geographic Display Area 6H IV-89
Geographic Display Area 6I IV-91

Big Hole Drainage Vicinity Map preceding V-1

Continental Divide National Scenic Trail Maps Appendix G

Figure I-1


CANADA
15
GREAT FALLS
MISSOULA
HELENA
BUTTE
90
BILLINGS
DILLON
BEAVERHEAD
National Forest
montana
NORTH DAKOTA
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IDAHO
WYOMING
15
NORTH
KEY MAP
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National Forest
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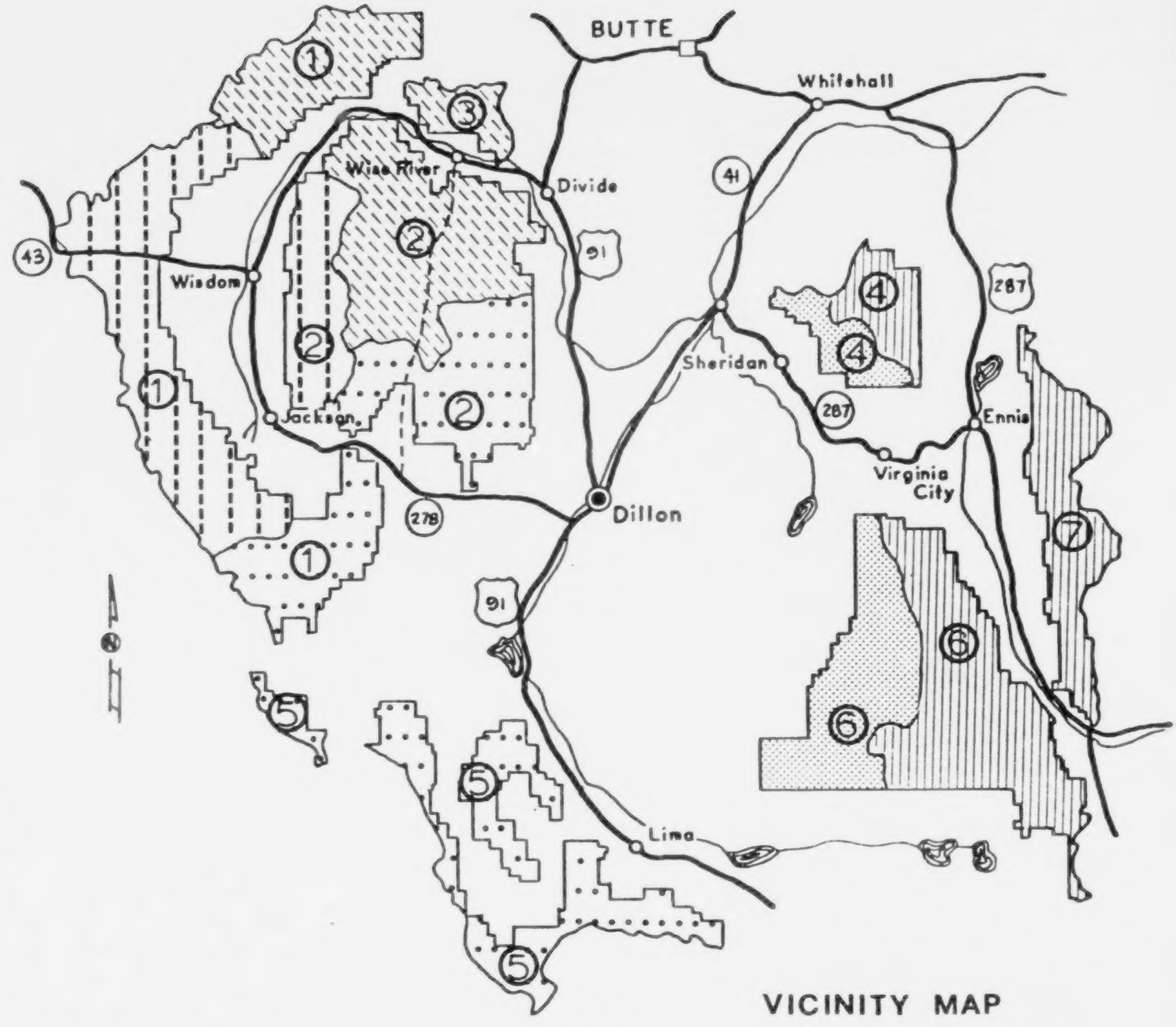
BUTTE
Whitehall
Divide
Wise River
Wisdom
Jackson
Dillon
Sheridan
Virginia City
Ennis
Lima
43
41
91
287
278
1
2
3
4
5
6
7
VICINITY MAP

RANGER DISTRICT LOCATIONS

Dillon Ranger District ⁘
Wise River Ranger District ▨
Wisdom Ranger District ┆
Sheridan Ranger District ░
Madison Ranger District ▥

PLANNING UNITS

1. WEST BIG HOLE
2. PIONEER
3. FLEECER
4. TOBACCO ROOT
5. LIMA
6. GRAVELLY
7. MADISON

FOREST PLANNING AREA

CHAPTER I

I. Introduction

A. Purpose

The Forest Plan guides all natural resource management activities and establishes management standards for the Beaverhead National Forest. It describes resource mangement practices, levels of resource production and management, and the availability and suitability of lands for resource management.

B. Management Direction

The goals, objectives, standards, schedule of management practices, and monitoring and evaluation requirements comprise the Plan's management direction. However, the projected outputs, services, and rates of implementation are dependent on the annual budgeting process.

C. Relationship to Other Documents

1. Environmental Impact Statement-

The Forest Plan is based on the various considerations which have been addressed in the accompanying Environmental Impact Statement (EIS), and represents the Proposed Action in that EIS (modified as required by the Record of Decision). The planning process and the analysis procedure used in developing this Plan, as well as the other alternatives that were considered, are described or referenced in the EIS. Project level activities will be planned and implemented to carry out the management direction in this Plan. The NEPA requirements will be followed as the site specific issues and impacts are addressed during project development.

2. Regional Guide-

The Regional Guide displays the Northern Region's portion of the Forest and Rangeland Renewable Resources Planning Act (RPA) Program among the National Forests, provides direction for National Forest plans, and develops standards and guidelines for addressing major issues and management concerns which need to be considered at the Regional level to facilitate Forest Planning. The Regional Guide process allows for discussion and analysis of National Forest program capabilities to determine opportunities to meet short and long-term natural resource demands.

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CHAPTER II

II. Forest-wide Management Direction

A. Goals

The management goals for the Beaverhead National Forest demonstrate the ways in which this Forest Plan addresses the issues and concerns identified in the Forest planning process, Federal laws and regulations, and Forest Service policy. The goals were developed by the Forest Management Team to reflect the goals and objectives of the Proposed Action identified in the Beaverhead National Forest Environmental Impact Statement. The goals guide the development of management objectives, Forest-wide standards, and Management Area direction.

1. Recognize and promote the intrinsic ecological and economic value of the wildlife and fisheries resources on the Beaverhead National Forest.

    a. Provide sufficient diverse habitats to maintain viable populations of all native wildlife species to ensure diversified recreational opportunities and ecological stability.

    b. Maintain elk habitat security and quality, providing diverse, high quality hunting opportunities and carrying capacity for herd populations that will not create conflicts with private landowners' needs.

    c. Provide habitat that contributes to the recovery of Threatened and Endangered plant and animal species in accordance with approved recovery plans. (Threatened and endangered species include the grizzly bear, bald eagle, peregrine falcon, and gray wolf.)

    d. Recognize the importance of the fishery resource, providing for the protection and/or enhancement of fisheries habitat in all project activities.

2. Ensure a high degree of water quality and sufficient water quantity in on-Forest streams to protect fisheries habitat, water based recreation, municipal water supplies, and downstream uses in accordance with State of Montana Water Quality Standards.

3. Recommend wilderness classification for those areas of the National Forest that have received a high level of public support for wilderness classification and where the conflict with other resource uses can be minimized.

4. Provide quality primitive or semi-primitive recreational opportunities and elk security during hunting season by maintaining inventoried roadless lands with high recreational values in a roadless status.

5. Provide a spectrum of recreation opportunities which fulfills expected recreational demands and recognizes the recreational opportunities that can best be provided on the Beaverhead National Forest.

6. Provide opportunities for use of forage by domestic livestock at or above current permitted levels of use while protecting or enhancing fishery habitat, riparian areas, recreation and other forest resources.

7. Develop a healthier age and size class distribution of the timber resource though a regulated, nondeclining flow of timber products from those Forest lands suitable for timber management; minimize losses to insect and disease consistent with other resource management goals and objectives.

8. Ensure that constructed roads are the minimum density needed for the scheduled management activities and that they are built and managed to the minimum standard necessary to meet the goals of the Management Area.

9. Provide for public access to National Forest System lands at identified entry points along the Forest boundary, ensuring that the degree of development of that access is consistent with the expected level and type of use and with resource protection concerns.

10. Ensure that opportunities for mineral exploration and development are provided in compliance with laws and regulations and, to the extent possible given those laws and regulations, with Management Area goals.

11. Locate and protect cultural resources to maintain their scientific and historical values.

12. Coordinate with the land and resource management and planning efforts of other Federal, State, and local agencies, and with private landowners.

13. Increase public understanding of Forest Service management objectives, opportunities and available services through educational and informational programs, including those that highlight "Low Impact" use of National Forest resources.

14. Strive to meet all stated Forest goals in an economically efficient manner.

B. Objectives

Following are brief summaries of how the various resources and activities will be managed under the Forest Plan. A complete understanding of the management direction can be attained by reading the Forest-wide goals and standards in this chapter, and the Management Area goals and standards in Chapter III.

1. Resource/Activity Summaries

a. Wildlife

Maintenance and enhancement of wildlife habitat has high priority in the management of the Forest. Viable populations of all existing wildlife species will be maintained by providing a diversity of habitats thoroughout the Forest. Wildlife indicator species have been identified and will be monitored to ensure that assumptions concerning the effects of management activities on wildlife habitat and populations are appropriate.

The critical value of Forest lands to the Southwestern Montana elk population is recognized. Management standards incorporated into projects will be designed to maintain elk winter and summer range and elk security during the big game hunting season. Activities associated with the timber management program will be most affected by the standards designed to protect elk habitat. When analysis indicates that effective security cover cannot be maintained in a given area due to proposed timber harvest activity, the timber sale will be reduced, rescheduled, dropped or motorized access on additional roads will be restricted. Reasonable public access to the area will be maintained. Efforts to maintain security for elk populations are oriented toward preserving options for management of hunting seasons and varied types of hunter opportunities.

Domestic livestock use on winter ranges and on other key areas will be managed and may be restricted to ensure availability of adequate forage for wintering elk. Habitat improvement projects including prescribed burning will be scheduled as appropriate to improve or maintain desired habitat condition.

Management will emphasize maintenance of opportunities to achieve the recovery of species identified as threatened or endangered. Peregrine falcon habitat will be maintained. Bald eagle use and nesting habitat will be maintained by implementing current habitat management guidelines. Gray wolf habitat on the Forest will be evaluated whenever a project may impact it. The evaluation will be designed to determine if and to what extent the planned activities will adversely affect the habitat. The Greater Yellowstone Grizzly Bear Recovery Plan lists no occupied habitat on the Forest. Occassional or transient use of Forest lands by grizzly bear will be documented and the habitat suitability of the Forest will be evaluated.

Vegetative diversity is important in maintaining suitable habitat for the wide array of wildlife species occuring on the Forest. Providing for vegetative diversity involves maintaining or developing over time an adequate number of acres of successional stages within each major vegetative community. Also important is maintaining specific habitat features necessary to individual species and groups of species. Nongame and small game needs will be enhanced by such things as creating nesting sites for waterfowl, leaving dead woody material in an area following timber harvest, maintaining tree snags for cavity nesters in timber harvest areas, and protecting special habitat components such as wallows, licks, talus slopes, riparian areas, and wetlands. Prescribed fire will be used to develop earlier successional stages in grasslands, aspen, willow, sagebrush, and whitebark pine vegetative communities. The timber harvest program will provide habitat diversity by creating an array of successional stages of forest types over time. These earlier successional vegetative stages (seral communities), are very important to a wide variety of wildlife species.

The Forest Service will coordinate with Montana Department of Fish, Wildlife, and Parks regarding management programs and activities that have the potential of affecting wildlife habitat or populations. Management activities involving threatened or endangered species will also be coordinated with the U.S. Fish and Wildlife Service.

b. Fisheries

The fisheries program recognizes the importance of Forest streams and lakes to both on-Forest and downstream fisheries, including the Big Hole, Madison, Beaverhead Rivers, and their tributaries.

"Best Management Practices" and Forestwide standards will be implemented in all management activities; and will be of particular significance whenever a management activity has the potential to produce adverse impacts to the fishery resource. For example, domestic livestock grazing will be managed and may be limited in riparian areas to ensure streambank stability and maintain seventy-five percent protective vegetative cover along streams containing a fishery.

Inventory and analysis of stream and lake conditions will identify opportunities for habitat improvement projects which would increase the productivity of the fisheries habitat throughout the Forest. Management of streams and lakes located within Wilderness areas will be in keeping with the Wilderness Act.

c. Watershed

The Forest provides the headwaters for the Big Hole, Beaverhead, and Madison blue ribbon trout streams. Management efforts to maintain the existing high water quality of these and other waters is of high priority. Appropriate planning, analysis, mitigation, and monitoring will be done to ensure that management activities will not adversely affect water quality and quantity.

Ground disturbing activities such as road construction or timber harvest will be preceeded by a "cumulative effects feasibility analysis" prior to project implementation. This analysis addresses those management activities occurring on the National Forest and for which assessment of sediment production occurrence or potential can be measured. The analysis will provide the guidance necessary to ensure that the project in combination with other scheduled activities will not increase water yields or sediment above acceptable levels within and to the Forest boundary. State of Montana Water Quality Standards will be met or exceeded. Best Management Practices (those activities or standards which will prevent or reduce stream sedimentation and unacceptable increases in water yield) will be implemented. For example; roads will be located out of stream bottoms, stream crossings will be minimized, roads will be maintained to assure proper drainage, culverts will be properly installed, and so on.

The amount and scheduling of ground disturbing activities allowed within a drainage will depend on the effect of previous disturbances, the expected effect of planned activities, the rate of hydrologic recovery and the ability of stream channels to handle expected flow and sediment increases. Water balance analyses will be designed to predict annual peak increases in stream flow, the effect on late season flows, the probability of stream channel degradation, and the amount and timing of expected increases in sediment yield.

d. Soils

Soil productivity will be maintained and soil erosion will be minimized through the application of Best Management Practices developed through project design and analysis, careful riparian area management, and appropriate mitigation measures. If soil productivity or erosion approach unacceptable levels, project design will be modified, more restrictive mitigation measures will be applied, or projects will be dropped or rescheduled.

e. Air Quality

Air quality will be maintained within the standards set by federal and state agencies and by the Montana Airshed Group's Memorandum of Agreement.

f. Recreation

The Beaverhead National Forest will be managed to provide a broad spectrum of recreation opportunities. Opportunities will range from "primitive" to "rural" as classified by the Recreation Opportunity Spectrum (ROS). The largest acreage will be in the "non-motorized semi-primitive category". This category provides a backcountry environment for recreation opportunities that do not require the use of motorized vehicles.

About 6 percent of the Forest will provide primitive recreation opportunities. Primitive opportunities will be found in portions of the the Italian Peaks Proposed Wilderness, the Anaconda-Pintler Wilderness and the Lee Metcalf Wilderness. Primitive recreation opportunities do not include the use of motorized vehicles.

Semi-primitive nonmotorized recreation opportunities will be found on 36 percent of the Forest. Semi-primitive motorized recreation opportunities will be found on 22 percent of the Forest. During the fall hunting season, there will be a shift in semi-primitive recreation opportunities from motorized to nonmotorized as roads and areas are seasonally closed to provide wildlife habitat security.

Acreage providing roaded-natural appearing recreation opportunities will encompass 7 percent of the Forest. Acreage that provides roaded-modified recreation opportunities (generally within or influenced by the areas where the timber resource is being managed) will increase to comprise 29 percent of the Forest. During the general fall hunting season some of this acreage will be closed to motorized access. A very small percentage of the National Forest will be within the "rural" ROS category (.3 percent).

Forest managers will continue to seek out and expand upon cooperative efforts with interested user groups such as motorcycle, skier, and snowmobile groups to provide for rehabilitation of existing facilities and design and development of new recreation opportunities.

Reconstruction of about 10 miles of existing trail will be scheduled annually. Some of the reconstruction work will require relocation of existing sections of trail. Reconstruction activities will emphasize elimination of boggy sections and public safety hazards. Approximately half the scheduled trail work will be located in classified Wildernesses.

Recreation Opportunity Guides (ROG's) for each Ranger District will be completed and made available to the public by 1990.

Developed campgrounds will be managed at the reduced service level. Fees will be charged at all campgrounds where existing facilities permit charging and where a feasibility analysis indicates revenues will cover costs. Where reasonable, alternate management strategies such as concessionaires, will be utilized.

Additional developed recreation facilities will not be constructed because existing site capacity is considered adequate to accomodate projected levels of use. However, facility reconstruction, rehabilitation, and upgrading will be accomplished as funds become available with priorities placed on correcting safety, health, or resource problems. Facility reconstruction may result in slight increases in site capacity, measured in PAOT's (People at One Time).

In dispersed areas where heavy public use is resulting in resource impacts, sanitary facilities will be installed as funds become available.

Recreation residences and resort permits will be scheduled for termination when the use is in conflict with Forest-wide or Management Area goals. Rental of Forest Service cabins, such as Hogan Cabin, will be continued where expenses do not exceed revenues.

Recreational hunting and fishing opportunities will be maintained on the Forest. These opportunities may change as road construction and timber harvest occurs in areas that are currently roadless. Mitigation measures such as road closures will be used to minimize the impacts of timber harvest and road construction on big game security and to provide varied recreational hunting opportunities.

Provision of adequate public access to National Forest lands is of high priority. In some areas, recreational access to the National Forest will be provided by roads constructed for timber harvest. Where public demand is high, roads may be built or existing roads upgraded solely for recreational access. In some situations, the existing access road or trail is considered adequate for recreational access and only the public right-of-way will be obtained. Needed access has been identified and prioritized and will be pursued as funds become available for rights-of-way acquisition and construction or reconstruction.

g. Visual Quality

All landscape altering management activities will be designed to meet or exceed the assigned visual quality objectives for the area. Management of the visual resource will receive priority in identified sensitive viewing areas (identified in Appendix D). Sensitive viewing areas are the areas seen from identified campgrounds, highways, major National Forest system roads, and National Recreation Trails.

h. Cultural Resources

The cultural resources of the Forest, both prehistoric and historic, will be managed to maintain their scientific, social, and historical values. Management will be in compliance with cultural resource management goals, applicable Federal laws and Forest Service regulations. As activities such as timber harvest and mineral development occur on the Forest, additional inventory and, as necessary, mitigation will occur. Inventories will provide additional information leading to improved understanding of previous human activities on the Forest.

i. The Roadless Resource

Of the 1,246,000 acres of inventoried roadless lands on the Forest, about 76 percent will remain in the roadless inventory at the end of the next ten years. Of the 1,246,000 acres of inventoried roadless lands, about 10 percent will be impacted by development within the next ten years); 14 percent is recommended for wilderness classification.

j. Wilderness

The existing Anaconda-Pintler and the Lee Metcalf Wildernesses will be managed according to the objectives of the appropriate wilderness legislation, Management Area #9 and appended management direction, including fire management direction.

If roadless areas recommended for wilderness classification are incorporated into wilderness legislation, new wildernesses on the Forest will include: The West Big Hole Wilderness (55,000 acres); the East Pioneers Wilderness (80,000 acres); and the Italian Peaks Wilderness (26,000 acres Beaverhead, 40,000 acres Targhee). Additions to the Anaconda-Pintler Wilderness would occur in the North Big Hole (6,500 acres) and the Storm Lake area (1,700 acres).

Adequate access and trailhead facilities will be provided to new and existing wilderness as funds become available. Access priorities have been identified.

Education will be used to reduce undesirable visitor use and overuse of specific sites. The limits of acceptable change process will be used to determine the types and amounts of recreation use that will be allowed while maintaining long term opportunities for wilderness experiences.

Domestic livestock grazing on existing allotments will be maintained.

k. Domestic livestock

The objective for potential permitted AUM's on the Forest will remain at approximately the current level of 190,000 AUM's. Most of the forage necessary to sustain this level of grazing is on permanent rangeland with some furnished through transitory range maintained by the timber harvest program. Some allotments will need to have capacities adjusted based on the local range conditions and other resource management objectives for the area; others will be able to sustain some additional use. In all allotments, other resource management objectives, specified through Forest-wide management direction and Management Area direction, will be recognized in Allotment Management Plans and and guide the determination of capacity and appropriate grazing system.

Domestic livestock grazing will be managed and may be limited in riparian areas to ensure streambank stability and maintain seventy-five percent protective vegetative cover along streams containing a fishery.

Domestic livestock grazing will be managed and may be limited on winter ranges and in other key areas to ensure availability of adequate forage for wintering elk.

Rest rotation or deferred management systems will generally be used. With these systems livestock grazing can be better controlled; forage more efficiently utilized; and other resources such as riparian areas, and wildlife winter ranges, can be more effectively managed. Some small allotments exist where rotation or deferred systems do not appear practical. Alternate management systems will be identified that will meet livestock management objectives and will be implemented.

Allotment Management Plans will identify the range improvements needed to achieve the objectives and management standards set by the Forest Plan. Structural improvements, such as fences, cattle guards, and water developments will be used as well as nonstructural improvements such as prescribed fire to address sagebrush or Douglas fir encrochment.

Best Management Practices will be used in all allotment management activities to protect soils and water quality.

Noxious weed control; conducted in cooperation with other agencies, private landowners, and public land managers; has high priority in the Forest program. Funds and deposits associated with the timber harvest program will be used to prevent infestations of noxious weeds that could result from the timber harvest traffic. Education efforts will be continued. Some range management funding, through the appropriated channels and the Range Betterment Fund (dollars generated by the grazing fees), will be utilized to address the noxious weed problems.

1. Timber

Approximately 16 percent of the Forest is in the suitable timber land base (338,340 acres without the West Pioneers available for management as prescribed in this Plan and 360,300 acres with the West Pioneers available for management). Timber management objectives for these acres provide for a sustained yield of timber products while maintaining land productivity, water quality, and elk security. The timber management program will be concentrated in the lodgepole pine stands in recognition of the suseptibility of those stands to mountain pine beetle infestation. Harvest of about 27,000 acres over the next ten years (an average of 2700 acres per year) is estimated to produce about 58 MMCF (173 MMBF) of timber over the decade. Detailed information about the objectives of the timber management program are displayed in several appendices including:

Appendix A--Land Classification Summary
Appendix F--Allowable Sale Quantity and Long Term Sustained Yield
Appendix H--Timber Productivity Classification
Appendix I--Present and Future Condition of the Forest
Appendix J--Vegetative Management Practices
Appendix K--10 Year Timber Sale Schedule

To the extent possible the timber program will, over time, address all acres considered suitable for timber management. This must be done to avoid a situation where harvest is concentrated in only a portion of the area resulting in unacceptable impacts. To fully utilize the entire suitable timber base, additional roads will be constructed to facilitate timber harvest. Over the next ten years, approximately 293 miles of additional road would be needed, averaging 29 miles of new construction per year. This calculation is based on the needs of the existing logging technology. New technology could result in fewer miles of road being needed. Best Management Practices will be used in every facet of the timber management program.

Timber harvest has, in the past few years, been concentrated on the Madison Ranger District due to the mountain pine beetle epedemic in the area. Over the next ten years a much smaller proportion of the Forest's harvest will be from that area because hiding cover for big game must be regained prior to future entries. Most of the timber harvest on the Forest will occur on the Dillon, Wise River, and Wisdom Ranger Districts. Timber on these Districts is largely mature lodgepole pine. Generally, timber volume in these existing stands is less than will be in the regenerated stands because of the history of mountain pine beetle infestations in the areas and the resultant impacts on the timber resource. Timber harvest of stands of mature lodgepole pine will create opportunities for regeneration and younger stands adding habitat diversity for wildlife and reducing fire hazards. Even-aged harvest methods will be used with openings generally less than 40 acres in size. Openings will be designed and located to maintain elk security and watershed protection.

m. Integrated Pest Management

The timber harvest program, in that it focuses on the lodgepole stands, works toward reducing the risk of a mountain pine beetle epidemic by breaking up the stands of even-aged lodgepole and creating over time more diverse aged stands. Silvicultural prescriptions for timber management will address other insect and disease concerns, such as mistletoe, root diseases, and western spruce budworm.

n. Minerals

Existing rights to prospect, develop, and mine on National Forest lands open to mineral entry will be recognized in implementation of this Forest Plan. Management Area and Forest-wide standards will be considered in the development of the Plan of Operations and/or in the approval of the Notice of Intent.

The majority of the National Forest lands have been leased for oil and gas exploration or have lease applications pending. The only acres withdrawn or proposed for withdrawal from leasing are classified and proposed Wildernesses. Surface occupancy is prohibited on leases in Research Natural Areas, administrative sites, and developed campgrounds and picnic areas. Areas withdrawn from mineral entry will be reevaluated in accordance with the Federal Land Policy and Management Act to determine if the withdrawal is still appropriate.

No action will be taken on lease applications in areas recommended for wilderness classification by this Forest Plan until Congress acts to classify them through legislation or releases them from wilderness consideration.

Stipulations included in leases protect, as appropriate, riparian areas, sensitive soils, wildlife winter ranges, visual quality, and other resource values in compliance with Management Area direction.

o. Facilities

The Forest's transportation system will be coordinated and integrated with the public and private road and trail systems to the fullest extent possible. Economic criteria and resource management objectives specified by the Forest Plan will be incorporated into transportation system planning, road design and construction, and transportation system management. Best Management Practices will be used.

Approximately 293 miles of road will be constructed over the next ten years, largely in support of the timber management program. It will be in addition to the existing road system of about 1700 miles. About 6 miles per year will be collector roads, usually requiring capital investment funds for construction. Construction of this collector mileage will complete the majority of the main accesses needed for management of the suitable timber land base identified in this Forest Plan. The rest of the roads to be constructed are local roads. Some of these roads may also reguire capital investment dollars. Actual mileage constructed may be less than estimated if new logging technology is utilized that requires less road construction.

Most of the new roads constructed on the Forest will be restricted to motorized public access with the exception of snowmobile use. More will be closed in the fall than during the rest of the year to maintain elk security. Some will be closed year long. Specific decisions on the transportation system needed and how it will be managed will be made through the interdisiplinary area transportation analysis. This process will be guided by the Management Area and Forest-wide goals and standards and by the area access guidelines for the area. Access guidelines define the level and degree of public access to be provided to an area of the National Forest. When projects that require roads are first evaluated, the decision on whether the roads will remain open or be closed will be made based on these guidelines. This will facilitate determination of the appropriate standard to which the road will be built. Road standards will be the lowest level possible given the management the road will receive and resource protection needs.

The Southwestern Montana Inter-Agency Visitor's map provides the user of federal and state lands information about access opportunities and travel restrictions. This Visitor's Map will be updated as needed. This update will generally occur every two to three years. The map also displays land management jurisdiction for public lands. Travel management will reflect the management objectives and goals of the Forest and specific Management Areas. Emergency orders affecting public access may be implemented between updates of the Visitor's Map.

p. Lands

Landownership adjustments, such as land exchange, fee acquisition, donations of fee simple, or easements, will be sought to achieve Management Area objectives. There are no plans for large scale land exchanges.

Important access points for the National Forest that cross private or other public lands have been identified. Acquisition of rights-of-way across these lands will be pursued in order of priority as funds are available. Generally, a road is in existence that has been providing the public access historically; the intent here is to clarify the public's right to use that access.

q. Fire

Prescribed fire will be used, as it has been in the past, to burn slash left from timber harvest, to increase livestock and big game forage, and in aspen and willow to facilitate stand reproduction and vigor.

Guidelines have been developed for all areas of the Forest through the Fire Management Plan (Appendix U) to determine how wildfire will be handled. These guidelines reflect the Management Area objectives. In some areas, wildfire will be immediately controlled. In other areas, fire will only be confined if conditions are right until it burns itself out. Fire in wilderness areas will be allowed to play a more natural role to maintain wilderness character. Cost efficiency is a factor considered in decisions regarding the management of wildfire.

2. Projected Outputs and Activities by Time Periods

Decade One projected outputs and activities that will be used for programming, budgeting, and attainment reporting are displayed in Table II-1. Other decades are displayed for information only. Outputs and activities are expressed as average annual.

The projected budget required to implement this Forest Plan is shown in Appendix L.

Activity schedules for various resources and programs are presented in Appendices K,N,M,O,P,Q,R, and S. Projects will be added to these activity schedules periodically as they are identified during the continuous project planning process. Projects included on the activity schedules may also be deferred or modified if problems are identified during project level environmental analysis (see Chapter VI, Section C for a discussion of project planning).

Table II-1
Projected Outputs and Activities by Time Period
1986-95: Planned Program
1996-2035: Program that would occur under this Forest Plan if management direction was continued beyond 1995.

			Average Annual Units				
			Planned Program	Possible Programs			
Target Item	Output or Activity	Unit of Measure	1986-1995	1996-2005	2006-2015	2016-2025	2026-2035
Recreation							
T01	Developed Use	M RVD	190	238	285	332	379
T02	Dispersed Use	M RVD	366	422	484	546	607
	Wilderness	M RVD	22	21	26	31	36
	Nonwilderness	M RVD	344	401	458	515	572
Wildlife and Fish							
T03	Wildlife Habitat Imp.	Acres	250	250	250	250	250
		Structures	21	21	21	21	21
T04	Fish Habitat Imp.	Acres	5	5	5	5	5
T05	T&E Habitat Imp.	Acres					
Range							
T06	Permitted Grazing Use	M AUM	190	191	192	193	194
T07	Range Improvements	Acres	1100	1100	1100	1100	1100
T08	Range Resource Plans (Allotment Mgmt. Plans)	Plans-new	5				
		-update	15	15	15	15	15

Table II-1 continued

			Average Annual Units				
			Planned Program	Possible Programs			
Target Item	Output or Activity	Unit of Measure	1986-1995	1996-2005	2006-2015	2016-2025	2026-2035
T09	Noxious Weed Control	Acres	2500	500	500	500	500
Soil							
T10	Soil Inventory	M Acre	75				
Lands							
T11	Land Exchange	Acres	320				
Minerals							
T12	Minerals Mgmt.	Cases	325				
Timber							
T13	Total Vol. Offered	MMCF 1/	5.8	7.1	7.9	8.1	8.1
		(MMBF)	17.3	21.2	23.4	24.1	24.1
		MMCF 2/	6.1	7.6	8.2	8.6	8.6
		(MMBF)	18.1	23.0	24.3	25.4	25.4
	Acres Scheduled for Harvest	Acres 1/	2700	3700	4700	4400	5200
		Acres 2/	3000	3900	4900	4600	5500
T15	Silvicultural Exams	M Acre	25	25	25	25	25
T16-17	Reforest- Approp	Acres	517	0	0	0	0
T18-19	Reforest- KV	Acres	2717	3656	4700	4351	5248
T20	Tbr Stand Imp- Approp	M Acre	.53	.53	0	0	0
T21	Tbr Stand Imp- KV	M Acre	.1	.1	2.71	3.20	2.80
T22	Landline Location	Miles	30	30	30	30	30
T44	Fuels Mgmt- BD	Acres	2717	3656	4700	4351	5248
Protection							
T23	Fuels Mgmt- FFP	Acres	3422	3422	3422	3422	3422
Facilities							
T81-82	Road Construction						
	Arterials & Collectors	Miles 3/	5.9	1.3	.7	.3	.3
	Locals	Miles 3/	23.1	26.0	24.9	23.2	21.2
	Road Reconstruction	Miles	3.5				
T83	Trail Const/Reconst	Miles	10	10	10	10	10

1/ This is the projected output without the West Pioneers Montana Wilderness Study Act area available for the management designations and activities displayed in this Forest Plan. Until Congress releases this area, the suitable timber base and allowable sale quantity does not include this area.

2/ This would be the projected output with the West Pioneers available for management as displayed in this Forest Plan.

3/ The miles of road needed to support the timber harvest program are slightly less than displayed in the EIS. This is a result of the ground truthing done in scheduling the timber sale program.

3. Research Natural Areas

The Regional habitat types listed in Table II-2 have been assigned by the Northern Regional Guide as the Forest's objectives for Research Natural Area recommendations. The table also lists proposed and candidate areas representative of each assigned type. Establishment reports will be prepared for each area.

The Forest currently maintains two existing Research Natural Areas: Cliff Lake and Cottonwood Creek. Proposed areas include Cave Mountain, O'Dell Lake, Skull Creek Meadows, Cattle Gulch, Elkhorn Lakes, and Horse Prairie. Candidate areas include Bryant Creek, Steele Creek, Gravelle Creek, Mifflin Creek and Miner Lake.

Two targets were recommended for dropping from the revised Regional Guide. Opportunities for establishing suitable RNAs for the river and SAVE/ELCI habitats are not available on the Forest.

Remaining targets for which candidate areas have not been identified will be reviewed. Some may be filled within adjacent Forests, or on adjoining lands administered by other Federal agencies.

Table II-2

Habitat Type Code	Vegetative Habitat Type*	Occurrence**	Existing or Proposed RNA
Forest Types			
310	PSME/SYAL	M	Cliff Lake
320	PSME/CARU	M	Cliff Lake
370	PSME/ARCO	M	Cave Mountain
470	PICEA/LIBO	M	Cliff Lake
640	ABLA/VACA	m	Miner/Gravelle
660	ABLA/LIBO	M	
730	ABLA/VASC	M	Cliff Lake
750	ABLA/CARU	m	
780	ABLA/ARCO	M	
790	ABLA/CAGE	m	
Nonforest Types			
018	FEID/AGCA	M	Cliff Lake
018	FEID/CAFI	m	
018	FEID/DECA	m	Cave Mountain
031	ARAR/FEID	m	
032	ARTR/AGSP	m	
032	ARTR/FEID	M	Cottonwood Cr.
033	ARTRI/FEID	m	Horse Prairie
036	CELE/AGSP	m	Cattle Gulch
038	SAVE/ELCI	m	(Drop)

Aquatic Types and Subtypes

Type I Streams	Cliff Lake
Type II Streams	Cliff Lake
Cold Springs	O'Dell Lake
Rivers	(Drop)
Temporary Ponds	Miner/Gravelle
Average Production Lake	Elkhorn Lakes
Lake with fish	O'Dell Lake
Fresh Marsh - Deep	Miner Lakes
Bog Meadows	Skull Creek Meadows

* Vegetative descriptions are abbreviations of species names.

** M = Major representative in a zone.
m = Minor representative in a zone.

4. Additional Data Requirements and Accomplishment Schedule

Table II - 3 identifies additional requirements that are needed to improve the Forest's data base, to revise current data base inventories to new standards and to incorporate new data base requirements that have recently been identified.

Table II-3
Additional Data Requirements and Accomplishment Schedule

Data Requirement	Data Level	Accomplishment Schedule
Lands System Inventory and Order III Soil Survey	Regional Standard	1991
Lands System Inventory and Order IV Soil Survey Classified Areas	Regional Standard	1987
Lands System Inventory and Order II Soil Survey for Selected Intensively Managed Areas	National Cooperative Soil Survey Standards	Ongoing
Grizzly Bear Habitat: Survey and Delineate	Forest Service Manual 2620, 2630, 2670	Ongoing
Gray Wolf Habitat: Survey and Delineate	Forest Service Manual 2620, 2630, 2670	Ongoing
Peregrine Falcon Habitat Survey	Forest Service Manual 2620, 2630, 2670	Ongoing
Elk Key Habitat Components	Forest Plan	Ongoing
In-place Timber Inventory	Forest Service Handbook	1993
Stream and Lake Habitat Surveys	Interagency Stream and Lake Survey Standard Methods for R1/R4; direction pending	Ongoing
Old-Growth Habitat Inventory, Survey and Delineate	Forest Service Manual 2620,2630	Ongoing
Inventory of Historic and Current Minerals and Energy Resource Operations	Regional Standard	1990

Assessment of Geologic Favorability for Mineral and Energy Resources	Regional Standard	1993
Inventory of Geologic Hazards	Regional Standard	1989
Inventory of Critical Stream and Lake Fisheries Habitat	Forest Standards	1989
Trail condition inventory	FSM 7730	1987
Cultural resources inventories	FSM 2360	ongoing
Validation of R1-R4 sediment model precision 1/	Forest Standards	ongoing

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1/ The work needed to accomplish validation of the R1-R4 sediment model is summarized in a working paper entitled "Monitoring Needs--R1-R4 Model". This paper describes the work that needs to occur to validate the model's 1) sediment yield assumptions, 2) erodibility assumptions, and 3) sediment/fisheries threshholds (used as a Forest-wide standard).

C. Research Needs

Many research needs have been proposed during the development of this Forest Plan, including some proposed by concerned members of the public during the formal comment period for the Revised Draft Environmental Impact Statement. The following research needs have been selected from those proposed because they would assist in the implementation of this Forest Plan. The research needs listed below will be evaluated by the Regional Forester for inclusion in the Regional research program proposal. It is anticipated that more research needs will become apparent during the monitoring and evaluation of the Forest Plan as it is implemented.

- Quantify effects of vegetation manipulation and soil disturbance on microbial and biochemical characteristics of forest-range soils.

- Determine duration of compaction effects on weakly and moderately frost-churned soils.

- Develop a reliable method for determining site productivity based on soil-site variables.

- Define the relationships of types and levels of instream sediment to the identified on-Forest and off-Forest uses of streams, particularly the migratory fisheries (including Artic Grayling in the Big Hole River), recreational uses, and public water supplies.

- Continue the Gravelly Range Elk Research Project being conducted by Montana Department of Fish, Wildlife and Parks, and U.S. Forest Service Intermountain Research Station.

- Determine how to regenerate lodgepole pine stands on steep slopes by broadcast burning with seed trees.

- Define point at which regenerated stands meet wildlife hiding cover requirements for a variety of habitat types and how growth loss will occur because of deferred stand treatment due to waiting for hiding cover to develop.

D. Desired Future Condition of the Forest

This section describes what the future Forest will be like as the Forest Plan management direction is implemented. It summarizes the anticipated physical changes which would result from carrying out planned management practices, at two points in time. The first point is at the end of the first decade, following ten years of plan implementation and prior to scheduled revision. The second point would be at the end of the fifth decade which coincides with the Resources Planning Act (RPA) planning horizon. The second point assumes that the management direction established through this Forest Plan would be continued over the next fifty years. This may not happen as the Forest Plan is revised every ten to fifteen years, in accordance with the National Forest Management Act direction, to ensure responsiveness to society's wants and needs.

Wildlife

Decade One - At the end of the first decade, a greater diversity of wildlife habitats and associated species should begin developing on the Forest. Timber harvest, prescribed burning, wildlife habitat improvement projects and natural successionary forces will have combined to regenerate and rejuvenate some mature and overmature habitats. The limited level of timber harvest scheduled will not create a significant change, however. Sufficient effective cover and winter forage will be available to support reasonable populations of elk.

Decade Five - Significant shifts in habitat age classes will have occurred by this time. A large portion of the mature and overmature age classes will have been replaced by younger types. Commensurate shifts in dependent wildlife species should occur. This increase in diversity of habitats and species will help assure the maintenance of viable populations of all native wildlife species. Effective cover and winter forage will remain sufficient to support reasonable populations of elk.

Fisheries

Decade One - The condition of the fisheries contained on the Forest should improve in the first decade. Implementation of improved livestock grazing systems designed to improve riparian area condition, and development of fishery habitat improvements will increase stream bank stability, reduce sedimentation and generally improve the quality of existing habitat. As a result, potential fish populations in Forest streams will be increased slightly. These increases will provide greater fishing opportunities on the Forest and increase fish recruitment to downstream fisheries such as the Bighole, Beaverhead, and Madison Rivers.

Decade Five - Potential fish populations are projected to increase slightly to 341,100. The high quality of the fishery habitat will be maintained. Potential populations will be sufficient to maintain excellent fishing opportunities and downstream recruitment.

Recreation

Decade One - Opportunities for a wide variety of recreational experiences will remain at a high level on the Forest. New roaded dispersed recreation opportunities will be available in those areas where roads are constructed for other resource development. The designation of Recreation Management Areas (MA-8s) will ensure continued availability of dispersed unroaded recreation opportunities. Dispersed recreation opportunities will be enhanced by providing public access in areas where it has previously been difficult or unavailable.

The Forest is not planning on expanding developed recreation facilities but the quality of the developed recreation experience should be enhanced by the maintenence and rehabilitation of existing campgrounds, and improving the distribution of use through public information programs.

Decade Five - Recreation opportunities and experiences should not change greatly from that found at the end of decade one. More areas will be available for roaded recreation as the Forest transportation system is expanded. Increases in visitor use will increase user densities but overall availablilty of opportunities will exceed demand on a Forest-wide basis.

Visual Quality

Decade One - Implementation of visual quality objectives will ensure that management activities will not be noticeable from major roads, campgrounds, communities or other designated "sensitive level one viewing areas". Elsewhere on the Forest, where management activities occur, changes in the landscape will be evident to the Forest visitor. Landscapes in these areas will exhibit mild to strong contrasts between mature timber stands and newly created openings. All changes to the landscape will be appropriate for the assigned visual sensitivity level.

Decade Five - Visual quality objectives for all areas of the Forest will be maintained. The majority of area allocated to timber management will show visual evidence of two to three timber entries. These multiple entries will create a diversity of texture in the landscape including: mature timber, pole timber, seedling/sapling and grass/forb successional stages.

Wilderness

Decade One - The diversity of wilderness recreation opportunities will be expanded with the addition of newly classified Wilderness in five areas--two additions to the Anaconda Pintler Wilderness (Storm Lake and the Hellroaring Drainage); Italian Peaks; Torrey Mountain (East Pioneers); and the West Big Hole. Recreational use in these areas is not expected to greatly increase in the first decade, and opportunities for solitude and natural settings will remain great. Access to wilderness will be available in many new areas due to acquisitions of rights-of-way and construction of access and trailhead facilities.

Decade Five - Increased public awareness of quality wilderness recreation experiences available on the Forest will bring more visitors to the areas. User densities will be increased and contact more frequent along major trails and at major sites; however, the opportunity for solitude and natural settings will be available away from these areas. Changes in the landscape toward a more diverse vegetative pattern will be evident where fire has been allowed to play its natural role.

Roadless Resource

Decade One - In the first decade, about 125,000 acres of existing inventoried roadless lands will show evidence of resource development. Although losing their roadless character, these areas will be producing a variety of forest products including timber, roaded recreation, diverse wildlife habitat, and increased livestock forage. About one million acres will be in the roadless inventory at the end of this first decade. Approximately 170,000 acres will be recommended for addition to the Wilderness system.

Decade Five - By the fifth decade, approximately 307,000 acres of inventoried roadless lands will show evidence of resource development. The majority of lands scheduled for resource development will be developed by this time.

Domestic Livestock

Decade One - In the first decade, domestic livestock grazing capacity will remain at the existing level of about 190,000 AUMs, assuming management objectives for winter range and riparian areas can be achieved through implementation of grazing systems and range improvements. By the end of the decade, all domestic livestock grazing allotments will be managed under allotment management plans and will have a grazing system in place. Implementation of allotment management plans will improve the overall condition of the range.

Decade five - By the fifth decade, permitted domestic livestock capacity is expected to slightly increase. This additional forage will be available for permitted use on transitory range created through timber harvest activities.

Timber Management

Decade One - During the first decade, the Forest plans to harvest 58.3 MMCF (173 MMBF) of timber from approximately 27,000 acres. Timber harvest will replace mature, overmature, diseased or insect infested timber stands. The majority of acres harvested will be regenerated with natural regeneration methods. Harvest and regeneration will replace low or nonproducing stands with faster growing, more productive stands of healthy tree species.

During the same decade, approximately 5,300 acres are scheduled for precommercial thinning. Thinning will increase the over-all vigor of the residual trees and increase the rate of growth. Increased vigor will reduce the predisposition of the stand to such problems as disease and insect damage.

Decade Five - During the first five decades, the Forest Plan if implemented as written would have prescribed harvest of approximately 391 MMCF (1162 MMBF) of timber from approximately 220,000 acres, assuming that the West Pioneers Wilderness Study area is available for management. Without the West Pioneers available, the Forest Plan would lead to harvest of about 370 MMCF (1,100 MMBF) of timber from approximately 207,000 acres. By the end of five decades, the Plan would have called for completion of nearly 100,000 acres of precommercial thinning. Most areas accessed in the first decade will be reentered at least once in these succeeding decades to remove timber adjacent to previously harvested units. By the fifth decade, stands harvested in the first decade should contain trees which are twenty-five to forty feet tall, well spaced where precommercial thinning has occurred, and relatively disease free.

Facilities

Decade One - In the first decade, approximately 293 miles of road will need to be constructed on the Forest, completing approximately 53% of the total planned Forest transportation system. There will be fewer roads built if new logging technologies are employed that require fewer miles of road construction. These roads will be constructed primarily for resource development; however, the Forest will continue to pursue a program of providing for public access as shown in appendix E.

Decade Five - By the fifth decade, approximately 1272 miles of road will have been constructed on the Forest, completing approximately 80% of the planned Forest transportation system. All arterial and collector construction and needed exterior access to the Forest should be completed by this time. All areas allocated to timber management should have a basic transportation system in place. Reconstruction of existing roads and some new construction of local roads will be necessary for timber management.

E. Standards

The following standards apply to the National Forest land that is administered by the Beaverhead National Forest. They are intended to supplement, not replace, the National and Regional policies, standards and guidelines found in Forest Service Manuals and Handbooks and the Northern Regional Guide.

Resource management standards are designed to facilitate attainment of Forest goals and objectives. On-the-ground application of some standards may vary between Management Areas, in recognition of the Management Area goals. It is the cumulative total of Management Area goals that result in attainment of Forest goals.

General

1. As soon as practicable, and subject to valid existing rights, all outstanding and future permits, contracts, cooperative agreements, and other instruments for occupancy and use of lands of the Beaverhead National Forest will be made consistent with the Forest Plan.

2. Subsequent activities affecting the Forest, including budget proposals, shall be based on the Forest Plan. Proposed implementation schedules may be changed to reflect differences between proposed annual budgets and appropriated funds. Such scheduled changes shall be considered an amendment to the Forest Plan, but shall not be considered a significant amendment, or require the preparation of an environmental impact statement, unless the changes significantly alter the long-term relationship between levels of multiple use goods and services projected under planned budget proposals as compared to those projected under actual appropriations.

3. If it is determined during project design that the best way to meet Forest-wide Goals and Objectives and/or Management Area goals conflicts with a Forest Plan standard, the Forest Supervisor may approve an exception to that standard for that project; such exceptions must be described in the Finding of No Significant Impact/Decision Notice for the project, and the rationale for making the exception must be documented in the project's Project File or Environmental Assessment.

WILDLIFE

1. Involve appropriate Montana Department of Fish, Wildlife and Parks personnel during project planning and implementation. Hold an annual meeting between appropriate Beaverhead National Forest and Montana Department of Fish, Wildlife and Parks and Bureau of Land Management personnel to discuss programs affecting wildlife and fish habitats (Memorandum of Understanding dated September, 1978). In addition, more project or area specific meetings will be held as necessary to address issues of mutual interest.

2. An annual meeting will be held with the Idaho Department of Fish and Game, Bureau of Land Management, and Salmon National Forest personnel to discuss and address interstate wildlife movement and management.

3. Utilize the general concepts presented in Agriculture Handbook No. 553, Wildlife Habitats in Managed Forests. This handbook provides management strategies for various wildlife habitat situations. The guidance provided by the handbook ensures that wildlife habitat is managed as a broad ecosystem which will provide a diverse, high quality environment for all native wildlife species. The Handbook's specific parameters may have to be adjusted for the Beaverhead National Forest. When more site specific management recommendations are available through the Forest Service or the Montana Department of Fish, Wildlife, and Parks, those recommendations will be considered.

4. Populations of wildlife "indicator species" will be monitored to measure the effect of management activities on representative wildlife habitats with the objective of ensuring that viable populations of existing native and desireable non-native vertebrate species are maintained.

   Indicator species identified for the Beaverhead National Forest are as follows:

Grizzly Bear	Threatenened Species
Peregrine Falcon	Endangered Species
Bald Eagle	Endangered Species
Gray Wolf	Endangered Species
Elk	Big Game Species
Sage Grouse	Sagebrush Communities
Pine Marten	Old growth Spruce-fir
Goshawk	Old Growth Douglas-fir
Trumpeter Swan	Marshland Communities
Arctic Grayling	Cold Water Fisheries
Cutthroat Trout	Cold Water Fisheries

5. Predatory animal control programs, and control of rodents or other problem wildlife populations will be coordinated with the U.S. Department of Agriculture, Animal and Plant Health Inspection Service; U.S. Fish and Wildlife Service (if impacts to threatened and endangered species are of concern); Montana Department of Agriculture; and Montana Department of Fish, Wildlife, and Parks.

6. Incorporate the recommendations of the "Coordinating Elk and Timber Management--Final Report of the Montana Cooperative Elk-Logging Study 1970-1985 (Appendix CC) into the planning of timber sales and road construction projects.

7. The 1982 Elk Logging Study Annual Report contains procedures for analyzing elk habitat security as it is affected by timber harvest and road construction activities. An "elk effective cover" analysis based on this report will be conducted for timber sales and effective cover ratings of at least 70 percent will be maintained during general hunting season. Appendix C depicts the process to be used.

8. Specific areas of the Forest currently do not meet the 70 percent level of elk effective cover during hunting season due primarily to high existing open road densities which are considered desirable for hunter access. In these areas timber management will be permitted, provided there is no increase in total open roads during general hunting season and elk use potential is maintained at or above 95 percent of optimum.

9. Maintain at least two thirds of the hiding cover associated with key habitat components over time. Subsequent timber sale activity will be allowed after regeneration provides hiding cover. Key habitat components are important features for wildlife. They include moist areas (wallows, etc.); foraging areas (meadows and parks); critical hiding cover (see the Glossary for a definition); thermal cover; migration routes and staging areas. These areas will be mapped on a site-by-site basis during project area analysis.

10. Range allotment management plans will address wildlife habitat needs.

11. Fences will be designed to allow wildlife passage and water developments will be designed to allow wildlife use.

12. Design of vegetative manipulation projects and grazing systems will consider potential impacts on wildlife, especially critical use areas such as calving and nesting areas.

13. Mining operations will be restricted within key wildlife habitat components during periods of use by wildlife, unless the operator/claimant can reasonably justify his need to continue.

Threatened and Endangered Species

1. All Forest projects will comply with the Endangered Species Act, Executive Orders, Forest Service Manual direction, implementation regulations of the National Forest Management Act, legal decisions that have a bearing on the Forest Service threatened and endangered species program, recovery plans and special studies.

2. Compliance with the items listed above and conservation of the threatened and endangered species identified for the Beaverhead National Forest will be accomplished as follows:

   a. Conduct a biological evaluation of each program or activity which is authorized or carried out in threatened and/or endangered species habitat to determine whether the activity will affect the species. Formal consultation with the Fish and Wildlife Service will be initiated for all agency activities or programs which may affect the species as determined by the biological evaluation. The biological evaluation will consider cumulative effects. Refer to FSM 2670 for definition and procedures for "biological evaluations".

   b. Participate in and comply with the Continental Divide Wolf Coordination Plan involving Idaho Fish and Game , Montana Department of Fish Wildlife and Parks, Salmon District of the Bureau of Land

Management, Butte District of the Bureau of Land Management and the Salmon National Forest. Manage gray wolf habitat primarily by maintaining a suitable prey base and reducing potential human-wolf encounters. Measures will include road management, timing of sale activity, etc. Record and if possible verify all wolf observations on the Forest in order to maintain and improve knowledge of distribution patterns.

c. Protect bald eagle habitat through participation in and compliance with the Greater Yellowstone Ecosystem Bald Eagle Management Plan involving Forest Service, Park Service, Bureau of Land Management and State Agencies. Record bald eagle observations on the Forest to maintain and increase knowledge of eagle distribution patterns.

d. Record and verify if possible all peregrine falcon observations on the Forest to determine if peregrines are present. If active peregrine falcon nests or other important habitat components are discovered, management guidelines will be developed to protect such areas.

e. The Beaverhead National Forest has no "occupied" grizzly bear habitat identified by the Greater Yellowstone Grizzly Bear Recovery Plan. Cooperate in grizzly bear management by documenting all grizzly bear use of the Forest lands and evaluating grizzly bear habitat suitability in the Madison Range. Management actions and protective measures will be implemented consistent with Management Area goals. Any area designated "occupied habitat" in the future will be managed in accordance with the Greater Yellowstone Grizzly Bear Recovery Plan guidelines.

f. Address "problem" bears in accordance with "Interagency Agreement of Management Involving Grizzly Bears in the Greater Yellowstone Area, for Determining Grizzly Bear Nuisance Status and for Controlling Nuisance Grizzly Bears on National Forest Land" (Appendix T).

3. The Forest Service will ensure that all land leased for oil, gas or mineral development is examined prior to the beginning of any surface-disturbing activities to determine effects upon any plant or animal species listed or officially proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operators' plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973, by detrimentally affecting endangered or threatened species or their habitats.

4. The Forest Service will fully cooperate with all interagency recovery efforts whenever recovery plans for endangered or threatened species are developed and implemented.

5. No known threatened or endangered plants are known to occur on the Beaverhead National Forest. However, Lemhi penstemon (penstemon lemhiensis) is listed as a species of special concern (USDA Forest Service 1980). If this species is located on the Forest, protection measures will be implemented.

6. In project planning activities recognize habitat that is considered essential for maintaining populations of "Species of Special Concern" identified by the State of Montana . Included species are listed in: Vertebrate Species of Special Interest or Concern, Montana Department of Fish Wildlife and Parks, Dennis L. Flath, June 1984.

Snag Management

1. Standing dead trees provide habitat for cavity nesting species. Snag management normally will occur in areas not allocated to timber management and be closely associated with the old growth component. In each compartment, snag retention will be based on a selected management level (percentage of optimum potential) for the respective timber type. Recommended numbers and sizes of hard snags to be retained are as follows:

   Douglas-fir -- 70 percent management level -- 1.5 snags/acre
   10 inch dbh minimum.

   Spruce -- 70 percent management level -- 2.5 snags/acre
   10 inch dbh minimum.

   Sub-alpine fir -- 60 percent management level -- 1.0 snags/acre
   10 inch dbh minimum.

2. Snags will be located adjacent to natural openings, near water, in valley bottoms, or in aspen groves, if possible. Snags will be retained in areas other than clearcuts where windthrow may occur. Wildlife trees will be concentrated in areas away from roads to discourage removal for firewood. Larger diameter snags will be retained wherever possible.

Dead and Down Material

1. Retain 10 - 15 tons of material per acre which includes some material 6 inch diameter or larger.

Old Growth

1. At least ten percent of the Douglas-fir and spruce component of each compartment will be maintained in old growth condition. Old growth stands will normally be selected in areas not allocated to timber management and will range in size from ten acres to several hundred acres.

FISHERIES

1. Coordinate with Montana Department of Fish, Wildlife and Parks in the design and implementation of projects and programs associated with the fisheries resource.

2. Maintain instream fishery habitat for spawning, rearing and adult life stages.

3. In fisheries streams, design all instream structures to allow for upstream fish passage.

4. Livestock management practices will be designed to prevent unacceptable loss of streambank vegetation and structural damage to streambanks. (See Range, #7)

5. Silvicultural prescriptions written for proposed harvest adjacent to fish bearing streams will prescribe for the steady entry of pool forming trees into the stream system. The number and type of trees will depend on specific site conditions and the needs of the individual fishery.

6. Within key spawning areas in any given drainage, if modeling of timber management and road construction activities to predict sediment production indicates potential increases of total sediment beyond fifty percent over natural levels, project activities will be modified, rescheduled, or deleted from the program of this Forest Plan. Field analysis may be conducted prior to project activities to determine existing sediment conditions and permit refinement of this standard.

WATERSHED

1. All projects affecting or suspected of affecting the watershed resource will incorporate Best Management Practices into the project design and implementation. The source document for candidate Best Management Practices will be the "Soils and Water Conservation Practices Handbook, FSH 2509.22"; Appendix W for this Forest Plan. Project analysis will determine which of the candidate Best Management Practices is appropriate for a given project and situation.

2. Municipal watersheds (Big Hole River, Indian Creek, and Rattlesnake Creek) will be managed under multiple-use concepts. Design and implementation of projects within the watershed will be guided by FSM 2543.12 as well as specific standards and guidelines. In the Rattlesnake and Indian Creek municipal watersheds, Watershed Management Plans will be followed.

3. Water quality will be maintained or improved in accordance with State and Federal standards, including cooperation and coordination with State agencies on proposed projects. Coordination with the State of Montana, as required by the Clean Water Act (33 U.S.C. 1323), concerning stream channels and water quality protection is detailed in the Cooperative Agreement to Implement the 208 Program on National Forests in the State of Montana. The agreement is displayed in FSM 2563.11, Northern Region Supplement.

4. Best Management Practices (BMPs) will continue to be developed and refined during the environmental analysis process. They will be incorporated into all land use and project plans as a principal mechanism for controlling non-point pollution sources as well as meeting soil and water quality or other resource goals.

5. Projects involving significant vegetation removal will require a preliminary watershed cumulative effects feasibility analysis prior to including them on implementation schedules. These projects will also require a more detailed watershed cumulative effects feasibility analysis as part of the environmental analysis. The analysis will ensure that the

project, considered with other activities, will not increase water yields or sediment beyond the physical limits imposed by the stream system for supporting its most restrictive beneficial use on the National Forest and up to the Forest boundary. The analysis will evaluate those cumulative activities whose sediment production can be measured. Such analysis will identify opportunities, if any exist, for mitigating adverse effects on water related beneficial uses, including investments for fish habitat or watershed improvement.

6. Instream activities will be accomplished during low flow or periods when the activities are determined to cause the least adverse impact on the stream environment.

7. Established snow courses will be protected from project activity, including maintenance of an adequate buffer to maintain reliability.

8. Instream flows necessary to maintain fisheries habitat, recreational uses, or other beneficial water uses will be identified and protected using applicable means under Federal and State water rights statutes for appropriate waterbodies and streams. In addition, water rights claimed to meet National Forest administration needs will be pursued.

9. Adequate riparian vegetation will be left along water bodies to provide shade, to maintain streambank stability, to maintain pool quality and quantity, and to promote filtering of overland flow.

SOILS

1. Best Management Practices (Appendix W--"Soils and Water Conservation Practices Handbook, FSH 2509.22") will be refined and adopted during the environmental analysis process. They will be incorporated into project design and implementation for all projects affecting or suspected of affecting the soils resource.

2. Management activities will be designed to sustain site productivity.

3. Following site preparation and slash disposal, retain 10 - 15 tons per acre of residual wood greater than 6" diameter where feasible to provide organic matter recycling. Silvicultural prescriptions will include information on the size, type, and amount of material to be retained on site.

AIR QUALITY

1. Management activities affecting air quality will comply with Federal and State standards and the Montana Airshed Group's Memorandum of Understanding.

RECREATION

1. A "Pack In - Pack Out" policy will be maintained in all non-fee dispersed and developed recreation areas. Disposal facilities will not be provided. Education and public information techniques will be used.

2. Recreation use in developed or dispersed sites will be managed to prevent or rehabilitate damage to the sites. Management restrictions may include signing, seasonal or yearlong access restrictions, traffic barriers, site closures and road and trail relocation or improvement.

3. Sanitary facilities will be installed in areas suffering resource degradation from high levels of public use or the area will be closed to that use.

4. New campgrounds and picnic areas will not be constructed.

5. Reconstruction and upgrading of developed recreation facilities such as campgrounds, picnic areas and boat ramps will be permitted as needed.

6. Reconstruction of developed facilities will ensure accessibility to the handicapped.

7. Outfitter and guide permits will be issued and administered as per the Beaverhead National Forest outfitter/guide policy. (See Appendix V).

8. Recreational residence and resort permits will be scheduled for termination when the use is in conflict with Forest-wide or Management Area goals.

9. New recreational cabin permits will not be issued.

10. The public will be informed of recreation opportunities through the Recreation Opportunity Guide (ROG) developed for each Ranger District.

11. Visual Sensitivity Levels for viewing points and corridors on the Forest are listed in Appendix D. These form the basis for assignment of Visual Quality Objectives for specific areas. All management activities will meet the Visual Quality Objectives appropriate for the areas given the assigned Visual Sensitivity Level.

12. Geographic Display Area (GDA) descriptions include objectives for the amount of each category of recreation opportunities available in each area. Management activites will be designed or limited to meet these objectives. Categories of recreation opportunities are described by the Recreation Opportunity Spectrum (ROS).

CULTURAL RESOURCES

1. Cultural resource surveys will be made prior to all significant surface disturbing activities. Forest survey efforts will be focused in areas where specific project activities such as timber sales, roads, range improvements, or mineral developments result in significant ground

disturbance. An inventory survey will also be made when any proposed activity will impact a potentially historic structure.

2. Discovered cultural resources will be evaluated in relation to published Advisory Council on Historic Preservation criteria for eligibility to the National Register of Historic Places. Sites determined to be eligible will be nominated to the National Register.

3. Cultural resource sites evaluated as significant will be preserved in place whenever possible. When such resources are threatened by project development, an effort to avoid or minimize adverse impact by project redesign will be made. When avoidance is judged by the Forest Supervisor to be not prudent or feasible, the values of the site will be conserved through proper scientific excavation, recording, analysis, and reporting.

4. Cultural resource surveys on large scale privately sponsored proposals will be the responsibility of the sponsor (with the exception of mining operations). Such surveys will be subject to review and approval of the Forest Service and will be coordinated with the State Historic Preservation Officer and the Advisory Council on Historic Preservation.

5. When cultural resources are discovered during project implementation, operations affecting that discovery will be curtailed until an analysis and evaluation is completed.

6. The Forest will consult with Native American traditional religious leaders on projects having the potential to affect known Native American cultural rights and practices.

RANGE

1. Allotment management planning will utilize a coordinated resource management and planning approach to ensure involvement of all interests.

2. All livestock grazing allotments will be managed by a planned management system (such as deferred entry or rest rotation) which may include construction of structural improvements needed to implement the system.

3. Prescribed fire or other approved methods will be used for control of sagebrush and tree encroachment and for other vegetative manipulation as needed to maintain or increase forage available to livestock and wildlife species within the guidance of the allotment management plan.

4. Structures such as fences or cattleguards will be installed where necessary to maintain control of livestock when management activities remove natural barriers.

5. Livestock forage utilization and range improvements on secondary livestock range that is also key big game habitat (such as elk winter range, calving areas or key summer range) will be managed to maintain reasonable wildlife populations as defined through coordination with the Montana Deparment of Fish, Wildlife and Parks and the Beaverhead National Forest.

6. Allotment management plans will refine Forest Plan objectives and specify utilization standards to ensure protection of plant vigor and soil and water quality. Objectives and utilization standards will be based on local range conditions and grazing management systems, soil stability, plant requirements and Management Area goals. Although utilization will vary with the objectives, generally, maximum livestock use on primary range will not exceed 55% total forage by weight. Variations from this norm will be specified in the allotment management plan and be based on local range conditions, soil stability, known individual plant requirements and Management Area goals.

7. Allotment management plans will refine Forest Plan objectives and specify utilization standards for riparian areas along fisheries streams where livestock grazing occurs to protect water quality, ensure streambank stability and 75 percent protective vegetative cover for fish habitat. Generally, these objectives can be met when utilization does not exceed the utilization standards specified in the following tabulation. Utilization standards are based on vegetative type and grazing management system. These standards will be used unless interdisciplinary team agreement can identify alternatives that can be applied and monitored to see if they will achieve the Forest-wide and Management Area goals and objectives.

Vegetative Type	Grazing System	Allowable Utilization
Grass/Grasslike Forb	Rest-rotation	55%
	Deferred	45%
Willow/Grass	Rest-rotation	60%
	Deferred	50%
Willow/Forest	Rest-rotation	60%
	Deferred	55%

8. Management plans for allotments containing elk winter ranges will specifically address how forage will be allocated for elk during normal wintering situations. Site specific situations vary but generally, utilization will be no more than 35 percent by livestock. Coordination with Montana Department of Fish, Wildlife and Parks will provide flexibility in utilization levels in recognition of site specific situations. When pastures are larger than the winter ranges, utilization standards will specifically address acceptable forage use by cattle on the winter range as compared to use in the remainder of the pasture.

9. Best Management Practices (BMPs) will be utilized in all allotment management activities to protect soils and water quality. Grazing systems and cultural practices will be used to reduce erosion by maintaining, improving, or reestablishing vegetative cover.

10. Domestic livestock grazing will not be allowed in developed campgrounds.

11. Grazing on transitory range will be regulated to protect other resources such as tree regeneration and wildlife forage in accordance with Management Area goals.

12. Areas within allotments that show resource damage or abuse will be rehabilitated. If conflicts cannot be resolved through improved allotment management, adjustments in grazing use may be used to facilitate rehabilitation efforts.

TIMBER

1. Silvicultural examinations and prescriptions will be required prior to timber manipulation or silvicultural treatment. Exceptions are allowed for removal of trees that block vision along roads, removal of hazard trees, clearing of rights-of-way, clearing for mineral development, Christmas tree sales in encroachment areas, and removal of firewood.

2. Scheduled timber harvest will not be allowed in those Management Areas described as unsuitable. Limited unscheduled timber harvest may be allowed within standards listed for each individual Management Area.

3. Apply the appropriate sivicultural system to best meet Management Area goals. Selection among systems will be based on the following criteria:

    a. develop stand conditions required for meeting resource management objectives.

    b. permit control of competing vegetation to allow regeneration consistent with Management Area goals.

    c. promote stand structures, species composition, and conditions that reduce the risk of damage by insects, disease, wind and fire.

    d. achieve compatibility with conventional harvest methods and long term area scheduling.

    e. Provide for economic efficiency while meeting Management Area goals.

4. Site preparation and debris disposal methods will:

    a. be compatible with the chosen silvicultural system.

    b. be designed to reduce fuel loadings to an acceptable risk of wildfire.

    c. ensure sufficient mineral soil exposure and/or debris reduction to provide for regeneration methods specified in the silvicultural prescription.

    d. retain 10 - 15 tons of debris on site to provide for organic matter recycling, protection for regeneration, and small game habitat.

5. Opportunities for genetic improvement of stands will be conducted in accordance with the Northern Region and Forest Tree Improvement Plans.

6. Regeneration methods will generally be designed to establish new stands of desirable tree species within five years of harvest. Longer regeneration periods may be specified to meet specific Management Area goals.

7. Supplemental regeneration will be scheduled when reforestation exams indicate that stocking levels, as specified in the silvicultural prescription, are unlikely to be met within the desired time frame.

8. Transportation and logging systems will be designed to provide for efficient long term area management within Management Area goals.

9. Openings created by harvest will generally not exceed forty acres in size. Exceptions will follow the rationale and procedures outlined in the Northern Region Guide.

10. Outside of identified key wildlife habitat components, a harvested area will no longer be considered a non-stocked opening when stocking surveys indicate prescribed stocking at or above two and one half feet in height. In addition, restocking must meet the criteria defined by the silvicultural prescription and the goals of the Management Area.

11. Within identified key wildlife habitat components, a harvested area will no longer be considered a non-stocked opening when regrowth in the opening meets the definition of hiding cover. Hiding cover is defined as the ability of an area to hide ninety percent of an elk at a viewing distance of two hundred feet. Key habitat components include: moist areas (wallows); foraging areas (meadows and parks); licks; critical hiding cover, thermal cover; migration routes and staging areas.
In addition, restocking must meet the criteria defined by the silvicultural prescription and the goals of the Management Area.

12. Harvest may occur adjacent to created openings, provided the total opening size does not exceed forty acres and Management Area goals are met.

13. Stands will normally not be scheduled for regeneration harvest prior to the Culmination of Mean Annual Increment (CMAI). Exceptions will be allowed to prevent loss from insects or disease.

14. Activities following timber harvest such as implementation of road closures and slash piling will be designed to facilitate the public gathering of fuelwood whenever feasible and consistent with Management Area goals.

15. Openings created by harvest may be contiguous with natural openings and the combination may exceed forty acres in size consistent with Management Area goals and Forest-wide standards.

16. Tractor yarding will not be allowed on slopes exceeding 45 percent. Exceptions may be allowed when soil damage is unlikely to occur if appropriately analyzed and rationale for the exception is documented in the project's environmental analysis.

17. Harvest in riparian and moist areas will require yarding systems and/or seasonal restrictions which minimize the possibility of soil compaction or sedimentation.

18. Yarding across live streams will require full suspension of logs.

19. Type maintenance may be used to maintain or improve wildlife and livestock forage production; for example, where Douglas-fir has encroached on grassland vegetative communities. Type maintenance will be justified by an appropriate environmental analysis.

20. To mitigate the effect of sale activities on wildlife populations, major timber harvests should be designed to complete sale activities in the shortest reasonable time and area scheduling should be designed to extend reentry periods as long as appropriate given Forest management goals.

21. Changes in the timber resource land suitability from that displayed through the Forest Plan will be based on the criteria contained in 36CFR 219.14(a), and follow the procedures for making Management Area changes described in the implementation chapter (Chapter VI) and Appendix M.

INTEGRATED PEST MANAGEMENT

1. The primary method of insect and disease control will be through the use of silvicultural systems. Pesticides will be recommended for control application only when clearly superior to other alternatives as determined by an appropriate environmental analysis.

2. Response to insect epidemics will be consistent with Management Area goals and Forest-wide standards.

3. Insect and disease detection surveys and evaluations will be accomplished routinely. Emphasis will be placed on evaluating risk potential and determining if efforts are needed to prevent or control losses.

NOXIOUS WEEDS

1. An agressive noxious weed control program will be continued and expanded to reduce or eliminate noxious weeds, or to at least to confine present infestations and prevent establishment of new infestations. The program will be implemented in accordance with the Beaverhead National Forest Environmental Impact Statement on Noxious Weed Control (Appendix JJ). Noxious weeds are listed in the Montana Weed Law and designated by County Weed Boards. Efforts will be coordinated with adjacent landowners and other controlling agencies. Educational programs will be used and supported that emphasize good management practices that prevent resource degradation and the spread of noxious weeds.

MINERALS

1. Existing rights to prospect, develop and mine on National Forest lands open to mineral entry will be recognized.

2. Access to valid mining claims is guaranteed under the mining laws. However, the operator/claimant must reasonably justify the need for a particular type of access.

3. Areas withdrawn from mineral entry will be reevaluated in accordance with the Federal Land Policy and Management Act to determine if the withdrawal is still necessary. This review with be conducted in accordance with established criteria (See Appendix O).

4. All proposed mining operations will be evaluated in accordance with 36 CFR 228 Subpart A. All activities should represent the next logical step in the development of the property. When applicable, operators/claimants must have an approved Notice of Intent or Plan of Operations and bond.

5. The Forest Service will coordinate with claimants to preserve corners and improvements on mining claims during timber harvest or other management activities.

6. Common variety minerals may be sold pursuant to federal regulations 36 CFR 228 Subpart C, where the sale of these minerals is compatible with the management goals of a given Management Area .

7. Stipulations which are based on the Environmental Assessment for the Beaverhead National Forest Oil and Gas Leasing Process, approved 8/14/79, (Appendix X) will be recommeded in accordance with the Management Area direction and Forest-wide goals, objectives and standards to achieve surface resource protection. Before action is recommended on any lease application, additional analysis in accordance with NEPA will be done.

8. Where leased lands include special areas that may contain special values, be needed for special purposes, or require special attention to prevent damage to surface resources, surface use or occupancy will be strictly controlled or, if absolutely necessary, excluded. Such restrictions may include limitations or exclusions of activities that occur in or near riparian areas, visually sensitive areas, areas of public or administrative use, important wildlife habitats, steep slopes and/or areas with sensitive soils. Restrictions may be year-long or seasonal.

9. Geophysical prospecting permit applications will be evaluated in a timely manner, in accordance with the Environmental Assessment for Geophysical Prospecting Activities prepared for the Beaverhead National Forest (approved 9/2/82) and existing Forest Service policy. Permits will be issued with appropriate stipulations to mitigate the impacts on other resources and uses.

10. The leassee (or designated operator) has the right to explore for and extract oil and gas from his leaseholding in an environmentally sound manner, in accordance with necessary and justifiable stipulations. Oil and

gas drilling requests will be evaluated on an individual basis and recieve site specific environmental analysis. The BLM must consult with the Forest Service prior to approving a drillsite, in order to obtain the Forest Service recommendations for detailed stipulations that will protect or minimize impacts on surface resources consistent with Management Area goals.

11. To maintain aesthetic values, all surface disturbing activities and semi-permanent and permanent facilities may require special design including location, painting, and camouflage to blend with the natural surroundings and meet the intent of visual quality objectives.

12. Any applicable site-specific modifications for maintenance and operations of producing oil and gas wells will be identified in project environmental analyses.

13. Reclamation requirements for mining and oil and gas roads and trails will be consistent with Management Area direction, the identified access objectives, and the area transportation analysis for the area. Recontouring to the extent practical will be required only when necessary to restore or maintain identified special values; such as the roadless character of an area, visually sensitive landscapes, fisheries or wildlife habitat, watershed values, recreation opportunities, or when necessary to facilitate re-establishment of vegetation. Reclamation requirements for surface excavations other than roads and trails will include recontouring and re-establishment of vegetation to the extent practicable.

FACILITIES

Roads

1. The use of system roads will be regulated and consistent with Management Area goals, and the identified access objectives for an area.

2. Road construction will be allowed unless expressly prohibited by Management Area direction. Road construction and reconstruction will be minimum density, cost, and standard necessary for the intended use, user safety and resource protection. Best management practices will be incorporated into all road design and construction to reduce sedimentation.

3. Short term facilities will be used where determined to be cost eficient over time and/or where their construction and use provide the best mechanism for meeting Management Area objectives. Short term facilities are on the Forest's road system, but may be revegetated and closed and not used again for many years.

4. Where road construction creates opportunities for livestock drift problems, cattleguards and fences will be installed as needed.

5. Effective erosion control will be conducted concurrently with road construction.

6. Road maintenance will be at a standard necessary to protect the investment of the road and public safety, and to reduce sediment reaching streams with recognition of the type of use and season of use the road receives.

7. The Southwesten Montana Interagency Visitor Map is incorporated as Appendix Y to this Forest Plan. It defines travel management and public access opportunities that reflect the management objectives and goals of the Forest and specific Management Areas. In addition, the Visitor Map considers safety of users, protection of resources and resolution of conflict between users. The Visitor Map displays roads and trails available for public use as well as off-road and on-road on-trail restrictions on motorized vehicle access. Major reviews and revision of the Visitor Map will occur periodically (generally every two to three years as needed). Intermediate emergency orders may be implemented between updates. Visitor Map updates are considered amendments to the Forest Plan.

8. Area access guidelines identified in the Geographic Display Area (GDA) descriptions will set the framework for area transporation analysis for an area. These guide level, density and standards of transporation facility development and set criteria for management of that facility.

9. New roads scheduled for closure will be so signed and/or gated when constructed.

10. Informational and educational efforts will focus on explaining rationale for the road management program in an effort to generate additional public understanding and support and reduce violations, vandalism, and enforcement costs.

11. Road or area closure methods will be determined through the project planning process and will be the ones determined to be most effective and cost-efficent given the Management Area objectives. Closure methods can include gates, signing, physical barriers, and obliteration of the entry portion of the road.

TRAILS

1. Area or project planning will assess the need for trail access in to an area in the future given the Management Area objectives and the degree of additional access that would be created through road construction. Trails will be removed from the system and erosion mitigation done if analysis determines that maintenance costs will outweigh the benefits associated with trail access to the area. Decisions to remove trails from the system will be clearly documented. The Southwestern Montana Interagency Visitor Map revision process will be used to provide opportunity for public input before trail segments are eliminated or travel restrictions are changed.

2. When existing trails are to remain on the system yet are crossed or obliterated by new roads, the road construction project will generally provide trail crossings, trailhead facilities, and/or relocation of trail segments. Trail treads will be retained through timber harvest units.

3. As a minimum, trails will be maintained on a schedule and to a standard which provides for public safety, protects adjacent resources, and retains the structural integrity of the trail tread.

4. Recreation Opportunity Spectrum (ROS) objectives for an area will guide the level of maintenance appropriate for trails within that area.

LANDS

1. The Forest Service will dispose of solid waste acoording to State and Federal dsposal standards. Permit holders will dispose of waste or garbage from National Forest lands at locations which conform to State and Federal disposal standards.

2. Sanitary facilities will be provided by all occupants including the Forest Service as well as those occupants under special use permits or cooperative agreements.

3. When public service facilities and resorts are permitted, these facilities will be managed and maintained to assure the safety and health of users.

4. As existing fences are reconstructed or as new fences are constructed, they will be located on the boundary between private and National Forest land.

5. Access points, needed to provide both public and management access the National Forest, have been identified in Appendix E. Additional analysis will be done for each access point to detemine accurate locations for access routes and where needed, easements to National Forest lands will be obtained. If necessary to provide public access to the National Forest, rights-of-way will be sought through condemnation only if they cannot be obtained by other reasonable means.

6. New special use permits will be approved only when compatible with the goals of the Management Area affected and the Forest-wide goals and objectives. Existing special use permits will be brought into compliance with the Forest Plan direction.

7. Water transmission lines and hydro-meteorological data collection devices will be maintained to prevent off-site resource damage. Any reconstruction will be to approved engineering standards.

8. Dams will be maintained to approved engineering standards.

9. Applications for hydropower, water diversion, water storage, or other water related facilities will be evaluated on a case-by-case basis. The applicant may be required to use private consultants or other personnel to make environmental studies needed by the Forest Service and/or State agencies for evaluation of the proposal. Close coordination and cooperation with other agencies will be sought.

FIRE MANAGEMENT

1. Prescribed fire will be used as appropriate to achieve land management goals, including but not limited to: rejuvenation of rangeland vegetation, rejuvenation of wildlife forage species, control of encroaching vegetation, site preparation for reforestation, and reduction of existing or created fuels.

2. Appropriate suppression response to wildfire is described in the Fire Management Plan (Appendix U).

3. Education programs will be utilized to better acquaint the public with the positive uses of fire and the beneficial role of natural fire as part of the Northern Rockies ecosystems.

LAW ENFORCEMENT

1. Informational and educational efforts will focus on clarifying regulations and the rationale underlying them to reduce conflict and enforcement costs. Education is the first choice, used to the extent practical, to reduce inappropriate visitor and user behavior.

CHAPTER III

8. [illegible] to control land management [illegible]

9. [illegible]

10. [illegible]

[illegible]

1. [illegible]

III. Management Area Direction

The Beaverhead National Forest is divided into 29 Management Areas (MA's), each with different management goals, resource potential and limitations. These Management Areas are mapped for the entire Forest with the following exceptions: MA 2 (administrative sites), MA 3 (cultural sites), MA 4 (mining operations), MA 5 (transportation and utility corridors), and MA 7 (campgrounds and picnic areas). The mapped Management Areas are displayed in the map for the "Beaverhead Forest Plan" which can be used for reference. The Management Area maps of record consist of a set of larger scale (2.64) maps on file in the Beaverhead National Forest Supervisor's Office.

The Management Area boundaries delineate areas with similiar management direction. With the exception of Congressionally established or special administrative boundaries, the Management Area boundaries are not firm lines and do not always follow definite topographic features which are easily found. The boundaries represent a transition from one set of opportunities and constraints to another, with management goals, objectives, and prescriptions established for each. The boundaries are flexible to assure that the identified values are protected and to incorporate additional information gained from further on-the-ground reconnaissance and project level planning.

The Forest-wide management direction included in Chapter II of this Plan applies to all Management Areas. This chapter describes each Management Area and lists the goals, management standards, schedule of management practices and monitoring requirements for each area. The schedules of management practices are not intended to act as limits but will be monitored to test for long-term application and, over the period of implementation, the achievement of Forest objectives.

Management Area Direction, consists of five parts:

1. Brief description of the lands encompassed by the Management Area.
2. Management Area goals.
3. Management practices and standards to accomplish the management goal.
4. First and second decade schedule of management practices for each Management Area. The first decade schedule presents activities that are planned for accomplishment; the second decade schedule presents activities that are projected to occur if implementation of this Plan continued through the second decade.
5. Monitoring elements applicable to the Management Area.

The primary intent of each prescription is summarized in the management goal statement; this will guide implementation of management practices within that Management Area. Management Area prescriptions are not rigid, site-specific mandates; they reflect instead, the objective to be achieved in meeting the goal of the Management Area. Implementation of management direction on specific projects will require analysis of site-specific needs, mitigation requirements and trade-off analysis through the usual evaluation processes and in compliance with the NEPA process.

Management Area #1 (412,288 acres).

Description

Management Area #1 consists of a wide variety of nonforest, noncommercial forest, and forested lands which are "unsuitable for timber production" but which accomodate numerous other resource uses. Topographic constraints, rocky soils, poor accessibility, and low timber resource values characterize the forested areas and lead to the unsuitable for timber management designation. In some portions of the Management Area, recreation opportunities, notably for hunting and fishing, are high. Wildlife habitat values are significant in some portions of the Management Area. Domestic livestock grazing occurs within allotments covering much of the rangeland included in this Management Area. Most of this area is encompassed by oil and gas leases. In some locations mineral potential is high or very high while in other areas, mineral values appear to be low.

Management Goals

Maintain the existing opportunities for utilization of the variety of resources found within this Management Area, managing in a custodial role with a low level of investment. Protect existing investments and, where necessary to maintain the existing resource values, allow for low-cost, low intensity additional improvements. Generally, allow resource use with minimal restrictions, designed only to protect the existing status of other resource values.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element **Standards**

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided at a low level of investment that focuses primarily on travel planning and management and trail maintenance activities. Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality. Trail reconstruction and trailhead facility construction can occur where the existing array of other resource values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exist.

The range of recreation opportunities defined by the Recreation Opportunity Spectrum (ROS) system and depicted in the Geographical Display Areas (Chapter III, Section II) will be maintained.

Recreation facilities will normally not be constructed, however, sanitary facilities may be installed in areas suffering resource degradation.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvement - Wildlife and fisheries habitat improvement projects will generally not be developed unless needed to correct existing habitat degredation.

RANGE

Range Management - Domestic livestock grazing is permitted at a low level of intensity.

Range Improvement - Existing improvements will be maintained and new improvements will be allowed, as needed, to facilitate management of adjacent Management Areas or to protect the existing resource values within this Management Area.

LANDS

Corridors - Within this Management Area, avoidance areas include 1) areas where the Visual Quality Objective is retention, and 2) key wildlife habitats such as wetlands and meadows.

TIMBER

Timber Harvest - Timber harvest will not be scheduled in this Management Area. The Management Area is unsuitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up.

FACILITIES

Road Construction - Roads will normally not be constructed for surface management objectives within this Management Area. Road construction will be allowed as necessary to access special uses, mineral development, or to provide access to other Management Areas consistent with the "area access guidelines" presented in Chapter IV, Geographic Display Areas.

Maintenance - Existing roads and trails will be maintained as needed given the "area access guidelines."

PROTECTION

Fire Management - This Management Area is classified as an "Observation Fire Management Area" with the exception of some small isolated tracts that are classified as "Operational" due to their size and location. Fire will be allowed to play a more natural role except where such activity will be a threat to public safety or adversely affect existing improvements and resources within this or adjacent Management Areas. Fire management strategies include control, confine, and contain options. Additional direction is in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Observational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions may be used as resource improvement tools. The low level of investment in this Management Area limits the emphasis on planned use of prescribed fire.

Schedule of Management Practices		Average Annual	
		Decade 1 (Planned)	Decade 2 (Projected)
Wildlife Habitat Improvement	(Acres)	11	11
	(Structures)	2.5	2.5
Range Improvements (Acres)		125	125
Trail reconstruction (Miles)		1	1

(About 40 additional miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground. These miles of trail will be removed from this Management Area and placed in Management Area #29).

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 5-1, 5-3, 6-1 through 6-5, 8-1 through 8-4, 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area 2 (96 acres outside of the Forest boundary).

Description

This Management Area consists of administrative sites which include Ranger Stations and work centers located both within and outside of the National Forest boundaries. This Management Area is not displayed on the 1/2" Management Area map but is included on the Management Area maps of record.

Management Goal

Provide and maintain sites or facilities necessary for the administration of Beaverhead National Forest lands.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element **Standards**

RECREATION

Dispersed Recreation - Dispersed recreation activities are permitted that do not interfere with administrative functions.

Visual Quality - Administrative sites are assigned the visual quality objective of modification. Visual screening of developments and facilities will occur to the extent practical.

Cultural Resources - Administrative buildings will be managed with their cultural and historic values in mind.

RANGE

Range Management - Livestock grazing will be permitted where compatible with administrative functions.

Noxious Weeds - Control of noxious weeds will be emphasized.

TIMBER

Timber Harvest - Timber may be removed if necessary for administrative purposes or removal of hazards. Timber removal will be under administrative use rather than commercial timber sale authority and therefore is classified as unsuitable.

WILDLIFE

Habitat Improvement - Habitat improvement will emphasize structures for nongame species.

MINERALS

Exploration and Development - Sites will be recommended for mineral withdrawal where feasible. Oil and gas leases will prohibit surface occupancy.

LANDS

Corridors - Existing and planned administrative facilities need to be avoided. Along existing access roads new corridor facilities or expansion of existing corridor facilities would be allowed.

FACILITIES

Road Construction - Road construction and reconstruction will be permitted to provide access to and within these sites as necessary for administrative purposes.

Improvements - Structural and non-structural improvements will be permitted to meet facility support needs for National Forest administration.

PROTECTION

Fire Management - This Management Area is classified as a "Control Fire Management Area" with fast and agressive "control" being the normal fire suppression response. Additional direction is in the Fire Management Plan, Appendix U.

Prescribed Fire - Prescribed fire with planned ignition can be used for treatment of activity fuels on a case by case basis.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	 Decade 2 (Projected)

No management practices are scheduled.

Monitoring Requirements

None within the Forest Plan Monitoring Requirements.

Management Area #3 (118 acres)

Description

This Management Area consists of scattered sites on the Forest requiring protection because of historical, archaeological, and/or paleontological significance. These areas include Lemhi Pass Sacajawea Memorial (Dillon Ranger District), Birch Creek Camp (Dillon Ranger District), and the Charcoal Kilns in Canyon Creek (Wise River Ranger District). Other areas may be designated as cultural resource surveys are completed. Thus, total acreage in this Management Area will increase with a corresponding decrease in the acreage of Management Areas where the sites occur. This Management Area is not displayed on the 1/2" Management Area map but is included on the Management Area maps of record.

Management Goals

Ensure that historical, archaeological, and/or paleontological sites are studied, preserved, or protected. Manage as a nonrenewable resource to retain site integrity.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element **Standards**

RECREATION

Recreation Management - Recreation will be limited to day-use unless otherwise provided for in special site direction. Recreation development is permitted as necessary for site management and interpretation.

Visual Quality - Visual quality objectives for this Management Area will be retention or preservation.

CULTURAL

Inventories - Known sites will be inventoried and priorities for protection will be identified.

Site Management - Site specific cultural resource management direction will be written and implemented on areas identified as needing immediate protection.

RANGE

Structural Improvements - Structural improvements may be used to protect cultural sites from impacts associated with domestic livestock grazing.

TIMBER

Timber Harvest - Timber harvest will not be scheduled in this Management Area. The Management Area is unsuitable for scheduled timber management. Timber removal will be limited to that necessary to enhance cultural values and provide for public safety.

MINERALS

Exploration and Development - Mitigation measures will be recommended to preserve, record, or protect cultural values on all unpatented mining claims. Sites in this Management Area will be recommended for mineral withdrawals, if appropriate. Oil and gas leases will prohibit surface occupancy.

LANDS

Corridors - Cultural sites are to be avoided. Where corridor facilities already exist, new facilities and/or expansion of existing facilities could be allowed if cultural values are protected.

FACILITIES

Construction/Maintenance - Road and trail construction and maintenance will be permitted to provide public access and interpretive facilities, as long as cultural values are protected. Structural improvements may be used to protect sites.

PROTECTION

Fire Management - This Management Area is classified as a "Control Fire Management Area" with fast and agressive "control" being the normal fire suppression response. Fire suppression methods will be selected that minimize the adverse impact on cultural sites. Additional direction is in the Fire Management Plan, Appendix U.

Prescribed Fire - Prescribed fire with planned ignition can be used for treatment of activity fuels on a case by case basis.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
No management practices are scheduled.		

Monitoring Requirements

None within the Forest Plan Monitoring Requirements.

Management Area #4 (undetermined acres).

Description

Management Area #4 consists of active or recently active mineral extraction and processing operations. These areas are not displayed on the Management Area maps. As other mining operations are developed or reactivated, total acreage in this Management Area will increase with a corresponding decrease in the acreage of Management Areas where the operations occur. If rehabilitation is accomplished, acres will be removed from this Management Area.

Management Goals

Encourage orderly exploration and development of mineral resources while mitigating and minimizing effects on surface resources.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element **Standards**

RECREATION

Visual Quality - Management practices to the extent possible will follow guidelines for the adjacent and surrounding Management Areas. Existing vegetation will be used to screen operations from adjacent areas.

RANGE

Range Management - Domestic livestock grazing may be permitted where consistent with management direction for adjacent Management Areas and where compatible with the mining operation.

Structural Improvements - Structural improvements may be used to control livestock grazing and avoid conflict with the mining operation.

TIMBER

Timber Harvest - Productive forest land may be scheduled for timber harvest where adjacent to or surrounded by Management Areas which schedule timber harvest. The area will be managed to continue a healthy and diverse vegetative pattern.

Where productive forest land occurs but is not adjacent to or surrounded by Management Areas which schedule timber harvest, harvest may be permitted to support mining operations or to salvage timber which will be destroyed by operations. Management objectives for surrounding or adjacent Management Areas will be addressed prior to permitting timber harvest.

MINERALS

Development - Mining operations will follow Forest-wide standards and State of Montana and Federal laws and regulations.

LANDS

Corridors - Corridor facilities will not be allowed where these will materially interfere with the mining operations or improvements. Where access roads exist, new corridor facilities could be allowed or existing facilities expanded.

PROTECTION

Fire Management - This Management Area is classified as a "Control Fire Management Area" with fast and agressive "control" being the normal fire suppression response. Prevention inspections will be used to minimize unplanned starts. Additional direction is found in the Fire Management Plan (Appendix U).

Prescribed Fire - Prescribed fire with planned ignition can be used for treatment of activity fuels on a case by case basis.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	 Decade 2 (Projected)

No management practices are scheduled.

Monitoring Requirements

None within the Forest Plan Monitoring Requirements.

Management Area #5 (undetermined acres).

Description

This Management Area consists of transportation and utility corridors; including collector roads, pipelines over eight inches, powerlines of 69 KV and over; and electronic sites. This Management Area is not displayed on the 1/2" Management Area map but existing corridors and electronic sites are included on the Management Area maps of record.

Management Goals

Maintain facility corridors and electronic sites on Beaverhead National Forest lands while providing opportunities for management and use of Forest resources so long as they do not interfere with corridor facility or electronic site objectives.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element **Standards**

RECREATION

Visual Quality - The visual quality objective for this Management Area will be modification. Appropriate measures will be taken to mitigate adverse impacts on visual quality that may be associated with the facility with the objective of achieving the visual quality objective of the surrounding or adjacent Management Area(s).

RANGE

Range Management - Grazing of domestic livestock will be permitted where compatible with the facility.

Range Improvements - Fencing may be needed to regulate domestic livestock movement when corridor clearing breachs natural barriers.

WILDLIFE

Where conflicts with raptors or other wildlife species occur, actions will be taken to minimize the problems.

TIMBER

Timber Harvest - Timber harvest will not be scheduled in this Management Area. The Management Area is unsuitable for scheduled timber management. Timber harvest may be allowed to clear and maintain the corridor or the site.

LANDS

Right-of-Way - Access to corridors and sites will be provided to facility operators for maintenance purposes. Access will be granted on routes which least affect other resources.

Existing corridors could allow new facilities.

Electronic Site Classification - Exisiting and potential sites suitable for electronic use must be classified for such use by the Regional Forester (FSM 2728.22 R1 Supp. #69). Existing electronic sites on the Forest are being evaluated through the classification process. Each classified site will be placed in MA 5. Site-specific management standards and guidelines will be written in the site classification documents.

FACILITIES

Planning - Electronic site occupancy will be nonexclusive and designed for shared occupancy when technically feasible.

Construction - Construction and placement of the sites and corridors will be done in a manner which takes into account the visual sensitivity of the seen area which they affect.

Maintenance - Slash disposal will be done mechanically where burning would endanger the facility.

The facilities may be signed to discourage vandalism or other unauthorized use.

PROTECTION

Fire Management - This Management Area is classified as a "Control Fire Management Area" with fast and agressive "control" being the normal fire suppression response. Utilize prevention inspections to minimize unplanned starts. Additional direction is found in the Fire Management Plan (Appendix U).

Prescribed Fire - Prescribed fire with planned ignition can be used for treatment of activity fuels on a case by case basis.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	 Decade 2 (Projected)

No management practices are scheduled.

Monitoring Requirements

None within the Forest Plan Monitoring Requirements.

Management Area #6 (3801 acres).

Description

Management Area #6 contains existing and proposed Research Natural Areas (RNAs). These areas provide examples of major forest ecosystems in southwestern Montana. Existing RNA's include Cliff Lake and Cottonwood Creek in the Gravelly Planning Unit (the Madison and Sheridan Ranger Districts). Several other areas are proposed as Research Natural Areas (see Chapter II, Table II-2). Additional areas will be added to the RNA system in the future.

Management Goals

Provide areas for nonmanipulative research, observation and study of undisturbed ecosystems which typify important forest, shrubland, grassland, alpine, aquatic, and geologic types on the Beaverhead National Forest. Avoid improvements such as fences or buildings except where needed to meet Research Natural Area objectives.

Management Direction

The Forest-wide Management Direction included in Chapter II of this Plan apply to this Management Area. Specific direction for protection and management will be nondestructive and nonmanipulative and is more specifically stated in the RNA establishment reports.

Resource Element **Standards**

RECREATION

Dispersed Recreation - Dispersed recreation use will be permitted where that use will not alter the dynamics of the natural ecosystems. Existing trails and trailhead facilities will be reconstructed or maintained as needed. No new trails or facilities can be developed unless needed for access to conduct research.

Visual Quality - The visual quality objective for this Management Area will be retention.

WILDLIFE AND FISH

Wildlife Habitat - Wildlife habitat improvement activities will generally not be permitted.

RANGE

Range Management - Livestock grazing will not be permitted.

Range Improvements - Fencing may be used to exclude livestock.

TIMBER

Timber Harvest - Timber harvest will not be allowed.

MINERALS

Exploration and Development - Common variety minerals will not be sold. These areas will be recommended for withdrawal from mineral entry. Oil and gas leases will prohibit surface occupancy.

LANDS

Special Use Permits - Only nonoccupancy special use permits will be allowed.

Corridors - Corridors will not be allowed across Research Natural Areas because of the unique natural values.

FACILITIES

Roads - Road construction and reconstruction is permitted as necessary to meet RNA management objectives.

Temporary structures such as gauging stations and instrument shelters will be allowed if needed to meet RNA management objectives.

PROTECTION

Fire Management - This Management Area is classified as a "Special Fire Management Area". Fire will be allowed to play a more natural role except where such activity will detract from the site specific habitat research objectives. Fire management options include control, confine, and contain fire management strategies. Suppression methods will be selected that minimize disturbance of existing ecosystems. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Special Areas").

Prescribed Fire - Planned and unplanned ignitions may be used for prescribed fire when they will promote the natural condition of the ecosystem involved and achieve the objectives of management of the RNA.

Integrated Pest Management - No measures will be undertaken for insect and disease control unless epidemic populations exist and adjacent lands are severely threatened.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Wildlife Habitat Improvements (Structures)	.4	0

Monitoring Requirements

None within the Forest Plan Monitoring Requirements.

Management Area #7 (3109 acres).

Description

This Management Area consists of 40 campgrounds and/or picnic areas located throughout the Beaverhead National Forest. Development ranges from an essentially natural environment with minimal facilities to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, toilets and boat launches. The location of these areas are displayed on the 1/2" Management Area map but the boundaries of the Management Area that encompasses each is not displayed. The acreage encompassed by the Management Area is included on the Management Area maps of record.

Management Goals

Maintain sites and facilities in good condition and ensure the safety and enjoyment of the users. Protect and enhance a natural appearing environment to the extent possible while maintaining the existing array of developed recreation sites.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Maintenance and Rehabilitation - Developed campgrounds or picnic areas will be maintained and rehabilitated as needed to maintain the investment and protect public safety. Funds will be allocated for the rehabilitation of existing sites on a cost-effective basis, considering the following:

a. Existing and projected use levels.

b. Proximity to population centers, popular lakes and streams, and travel routes.

c. Opportunity to provide savings of fossil fuels.

d. Investment and maintenance costs.

e. Opportunity to provide for a wide range of recreation opportunities.

Maintenance will be to at least the "reduced-service" level, preventing site degredation and loss of investments.

Site Modification - Pathways, picnic and camp units, toilets, and boat launches will be reconstructed or modified to handicapped facilities where feasible and funds are available.

Visual Quality - The Visual Quality objective for this Management Area is partial retention. Clearing will be permitted to accomodate needed facilities and structures. Visual screening of structures and facilities will be accomplished where possible and practical given the intended purpose of the facility or structure.

WILDLIFE

Habitat Improvement - Projects which allow selected wildlife species to be more visible to recreation users will be permitted when compatible with campground use.

RANGE

Range Management - Domestic livestock grazing will not be permitted.

TIMBER

Timber Harvest - Timber harvest will not be scheduled in this Management Area. The Management Area is unsuitable for scheduled timber management. Tree removal will be limited to that needed to maintain or improve recreation values and provide for public safety.

MINERALS

Exploration and Development - Common variety minerals will not be sold. Areas of this Management Area not already withdrawn from mineral entry will be recommended for withdrawal. Oil and gas leases will prohibit surface occupancy within a specified distance of the site.

LANDS

Corridors - Improvements and facilities will be avoided. Corridor facilities along existing access roads may be expanded and/or new facilities installed.

FACILITIES

Road Construction/Reconstruction - Roads may be constructed, or reconstructed, and maintained as necessary to support recreation facilities. Construction standards and maintenance levels will recognize the Recreation Opportunity Spectrum (ROS) classification of the surrounding area.

Facility maintenance - Developed facilities will be maintained, altered, or replaced as needed to maintain the "reduced service" level of management and to ensure protection of existing investments.

PROTECTION

Fire Management - This Management Area is classified as a "Control Fire Management Area" with fast and aggressive "control" being the normal fire suppression response. Suppression tactics that least alter the landscape or damage other resources will be used. Addtional direction is contained in the Fire Management Plan, Appendix U.

Fire prevention contacts will be emphasized.

Prescribed Fire - Prescribed fire through planned ignitions may be used to reduce fuel hazard or enhance the appearance of the area if compatible with developed site management objectives, including assurance of public safety.

Schedule of Management Practices Decade 1 (Planned)

Recreation Site Reconstruction and Sanitary Facilities

Facility Name	Ranger District	Existing PAOTs	New PAOTs	Work Planned
Wade Lake C.G	Madison	60	30	Modernization
Dispersed Sites	Wise River Sheridan	N.A.	N.A.	Sanitation - Install vault toilets at heavily used dispersed sites
Bear Creek E.O.R.	Madison	0	40	Constuct end-of-road facility at popular Wilderness trailhead
Steel Creek C.G.	Wisdom	15	20	Modernization
Grasshopper C.G.	Dillon	145	0	Modernization - rebuild roads Plant trees
Crystal Park Day Use Area	Dillon	15	25	Expand and surface parking area
Mussigbrod Lake C.G.	Wisdom	15	30	Modernization
East Creek C.G	Dillon	20	20	Modernization
Lower Branham Lake Day Use Area	Sheridan	0	40	Construct day use area
North and South Van Houten C.G.s				

	Wisdom	30	20	Modernization
Cottonwood Camp	Sheridan	15	100	Modernization Surface roads and spurs
Cliff Point C.G.	Madison	30	80	Modernization
Pintlar Creek C.G.	Wise River	20	25	Modernization
Lodgepole C.G.	Wise River	25	40	Modernization

C.G.= campground E.O.R. = end of road

NOTE: Most of the added new capacity is in the form of overflow parking, and does not take the form of "complete" facilities with tables and fire rings.

Wildlife Habitat Improvements (Structures)	.1	0

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are 1-5 and 5-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #8 (366,740 acres).

(This acreage excludes the acres assumed to be within Management Areas 11 and 12, riparian Management Areas).

Description

Management Area #8 consists of areas to be managed to provide a wide array of dispersed recreation opportunities; with high wildlife and fisheries values. Generally, the recreation opportunities are integrally interwoven with the wildlife and fisheries resources (opportunities such as hunting, fishing, and wildlife observation); however, in most areas, there are also opportunities for viewing spectacular scenery, solitude, and physical challenges. Hiking, horseback riding, recreational driving, motorcycle riding, snowmobiling, rock climbing, cross country skiing, and camping are some of the recreational activities that can take place. In some portions of the Management Area, domestic livestock grazing within existing allotments is a significant and compatible use. Management Area #8 encompasses nonforest, noncommercial forest, and forested areas. The areas are not suitable for timber management for bio-physical reasons or because of conflicts with Management Area goals. Therefore, timber harvest is not scheduled. Mineral and energy resource potential is very high in some portions of this Management Area with historic and ongoing exploration and development activities.

A more site-specific description of the areas included within this Management Area follows:

West Pioneers (161,332 acres) -- located in the West Pioneers Mountain Range. This area is recommended for nonwilderness through the Montana Wilderness Study Act Environmental Impact Statement and provides opportunities for primitive and semi-primitive motorized and nonmotorized recreation. The area is well-used throughout the summer and fall, with snowmobile use in the winter. Wildlife habitat values are high, providing for a population of mountain goats, moose, deer, bear, and elk. The area is gently rolling and forested, with lakes that hold trout and grayling populations. Domestic livestock grazing occurs within existing allotments. Mineral resource potential is high to very high throughout most of the area.

West Big Hole (40,304 acres) -- located adjacent to the southern end of the Proposed West Big Hole Wilderness. The area surrounds the Miner Lake developed campground and provides semi-primitive motorized and nonmotorized recreation opportunities throughout the year. The area is forested with interspersed open parks and a backdrop formed by the spectacular peaks of the Big Hole Mountain Range. Domestic livestock grazing occurs in existing allotments, generally at a low intensity of management and in the lower elevations. Wildlife values are high. Mineral resource potential is high to very high within a portion of the area.

Garfield Mountain (28,697 acres) -- located in the southern portion of the Forest, west of Interstate 15 and south of the Clark Canyon Reservoir. Lima Peaks and Red Conglomerated Peaks constitute the most spectacular scenery in the area and can be seen from the Interstate from Monida Pass to Lima. Lower elevations are grasslands, some of which go to 9000 feet. At mid elevations are parks interspersed with timberlands. At high elevations are rocky alpine habitats. This area affords good opportunities for solitude and fall hunting, providing nonmotorized semi-primitive recreation opportunities, with motorized access provided on the fringes of the area. Elk summer and winter range values are high. This area is very important range for domestic livestock grazing, with intensive range management occurring throughout the area. Oil and gas potential is very high.

Snowcrest (63,112 acres) -- encompassing the upper elevations and west slopes of the Snowcrest Mountain Range. The area is characterized by grass/sage lands with timbered drainages at the lower elevations; timberlands and interspersed parks at mid elevations; and rocky escarpments at upper elevations. Wildlife values (elk, mule deer, and mountain goats) are very high. This area provides mostly nonmotorized semi-primitive recreation opportunities, including viewing wildlife and scenery, solitude and, in the fall, quality hunting opportunities. Cross country hiking is not difficult. This area is very important range for domestic livestock grazing, with intensive range management occurring throughout the area. Oil and gas potential is very high. Phosphate potential is very high within a portion of the area.

Morrison Lake (8,504 acres) -- located along the Continental Divide, north of the Italian Peaks Wilderness (Proposed), west of Morrison Lake. The area is characterized by grass/sage lands with timbered drainages. The headwaters of the drainages are steep walled, with colorful rock formations. There are places where it is relatively easy to get up on the Continental Divide itself by traveling the open grassland ridges. This area affords excellent opportunities for cross country travel and solitude with rugged, pristine scenery. Recreation opportunities are semi-primitive motorized and nonmotorized. Elk summer range values are very high. This area is important range for domestic livestock grazing, especially at the lower elevations. Oil and gas potential is very high.

Minneopa Lake (8,922 acres) -- located adjacent to the Torrey Mountain Wilderness (Proposed) on the eastern slopes of the East Pioneers Mountain Range. The area contains twelve lakes, all but one of which support a fishery. The area is generally forested with lodgepole. Semi-primitive motorized and nonmotorized recreation opportunities are provided in most of the area, with roaded, natural appearing opportunities along the road in Birch Creek and in the lower Rattlesnake Creek area. This area includes much of the Dillon municipal watershed (Rattlesnake Creek). The area is well used in the summer and fall for hiking and fishing; in the winter, cross country skiing and snowmobiling occurs. Mineral exploration and development has and continues to occur in much of the area. There is a small amount of domestic livestock grazing in existing allotments.

Tobacco Roots (61,100 acres) -- located in the Tobacco Roots Mountain Range, northwest of Sheridan and east of Pony. This area is very rugged with high, sharp peaks and glacial lakes. Extensive mining activity has occurred in the past and is ongoing, resulting in primitive jeep trails, mine haul roads, and mine sites in many areas. Mineral resource potential is high to very high. Along the Mill Creek Road, entering the area from the west, are located three developed campgrounds. Major accesses from the east are Willow Creek and North and South Meadow Creeks. Recreational opportunities in the area are primarily classified as semi-primitive motorized, with opportunities for fishing, hunting, hiking, camping, and in some areas, technical rock climbing. Wildlife values, including mountain goats, are high. Domestic livestock grazing occurs in portions of the area.

Management Goals

Promote a variety of primitive and semi-primitive motorized and nonmotorized dispersed recreation opportunities, using the site specific recreation opportunities and other resource values and uses in an area (such as wildlife, fisheries, range forage, minerals, and so on) to guide the determination of specific opportunities provided by that area. Provide for maintenence of high quality wildlife and fisheries habitat, water quality and visual quality, enhancing those resource values where compatible with recreation management objectives. Provide for maintenance of current uses including livestock grazing, mineral exploration and development, unregulated harvest of posts, poles, and salvage material, and firewood cutting where compatible with recreation resource management objectives. In the Garfield Mountain, Morrison Lake, and Snowcrest areas, maintain a domestic livestock grazing program that recognizes the high value of the range forage through intensive management while providing recreation opportunities.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Dispersed Recreation - The range of dispersed recreation opportunities as described by the ROS system in the Geographical Display Areas (Chapter III, Section II) will be maintained.

The specific types of recreation experience and settings afforded by each area will be guided by the other resource values and uses of that area. Thus, in the Garfield Mountain, Snowcrest, and Morrison Lake areas, the intensive range management program will continue and recreation opportunities will coexist with that use of the area. In the Tobacco Root area, the extensive mineral development activity will continue and recreation opportunities will be provided that are compatible with that use.

Opportunities for motorized and nonmotorized use will generally be continued. Areas in which motorized use is to be restricted will be guided by the area access guidelines, displayed in the Geographical Display Areas and expressed through the Southwestern Montana Interagency Visitors Map revision process. Generally restrictions will be based on need to address resource impacts; including soil, water and wildlife; or user conflicts.

Recreation Facilities Construction, Reconstruction and Maintenance

System trails will be maintained and reconstructed as necessary to accomodate expected use. Maintenance levels will be guided by the ROS classification assigned to the area.

In the Garfield Mountain, Snowcrest, and Morrison Lake areas, the predominant mode of travel is expected to be cross country hiking and this will guide the level of investment in maintenance of a trail system.

Area rehabilitation will occur if resource damage from public use occurs. Year round or seasonal area closures may be used to alleviate adverse impacts that may be associated with motorized vehicle use.

West Big Hole, Minneopa, Tobacco Roots, West Pioneers -- Recreation facilities such as trailhead facilities, shelters, and toilets will be permitted to preserve or enhance recreation opportunities or to protect other resources. New construction will be consistent with maintenance of the ROS classification for the area.

Snowcrest, Morrison Lake, Garfield Mountain -- Construction of recreation facilities will not be permitted.

Visual Quality - The visual quality objective for this Management Area is partial retention unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

RANGE

Range management

West Pioneers, West Big Hole, Tobacco Roots, Minneopa -- Grazing will be allowed on existing allotments within approved management systems. Site specific conflicts between range and recreation will be resolved in allotment management plans. Livestock distribution and/or season of use may be modified to ensure compatibility of livestock grazing and recreational use of the area.

Garfield Mountain, Snowcrest, Morrison Lake -- Intensive grazing will be maintained on existing allotments within approved management systems through the use of cultural practices and vegetative manipulation that includes prescribed burning to maintain or enhance forage production and species composition. Site specific conflicts between range and recreation will be addressed in allotment management plans. Livestock use of the range forage in these areas is recognized as a significant resource use that guides the types of recreation experiences and settings afforded by the area.

Range improvements - Range improvements, such as salting, water developments, fencing and so on may be implemented to disperse livestock use and achieve range management objectives. The range management objectives vary (as noted above) for various portions of the Management Area.

WILDLIFE AND FISH

Habitat Improvement - Wildlife and fisheries habitat improvements, including road and area access management, prescribed fire, habitat improvement structures, and other techniques will be used to maintain and or enhance the quality of big game, nongame, and fisheries habitat. Design and implementation of the improvement projects will consider the recreation management objectives for the Management Area.

TIMBER

Timber Harvest - Timber harvest will not be scheduled in this Management Area. The Management Area is unsuitable for scheduled timber management. Post and pole and firewood removal may occur where access exists and where that use will not conflict with other resource values. Salvage of dead and dying or high-hazard trees is permitted where access exists to prevent disease and insect population build-up.

MINERALS

Exploration and Development - The objective of maintaining an unroaded environment in unroaded portions of the Management Area will be considered when evaluating Operating Plans. The unroaded environment will be maintained to the extent practical under the mining laws. Alternative access such as cross country travel or helicopter access for preliminary exploration will be considered. When practical, timing of mineral operations will be coordinated with dispersed recreation activities. Oil and gas activities will be strictly controlled to minimize conflicts with recreation activities.

Reclamation - Following mineral operations, reclamation measures will be required to restore the recreation and scenic values to the extent practical.

LANDS

Corridors - This Management Area is an avoidance area.

FACILITIES

Road Construction/Reconstruction - New roads will not be constructed for surface resource management purposes. Reconstruction of existing roads may occur if needed to meet the Management Area goals. Reconstruction will be guided by the ROS classification assigned to the area and by the area access guidelines specified in the Geographical Display Areas.

PROTECTION

Fire Management - This Management Area is classified as an "Observation Fire Management Area" with the exception of some small isolated tracts that are classified as "Operational" due to their size and location. Fire will be allowed to play a more natural role except where such activity will be a threat to public safety or adversely affect existing improvements and resources within this or adjacent Management Areas. Fire management strategies include control, confine, and contain options. Additional direction is in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Observational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions will be used to maintain vegetative diversity, increase forage production and enhance wildlife habitat values.

Integrated Pest Management - Areas will be evaluated periodically for significant insect and disease problems with endemic populations normal. If epidemic levels develop and control is necessary, the control method should minimize impacts on dispersed recreation and wildlife values.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Range Improvements (Acres)	75	75
Wildlife Habitat Improvements (Structures)	1.0	1.5
Trail reconstruction (Miles)	4	4

(About 43 additional miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground. These miles of trail will be removed from this Management Area and placed in Management Area #29.)

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-8, 1-11, 5-1, 5-3, 6-1 through 6-5, 8-3, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #9 (342,649 acres).

Description

This Management Area contains the Beaverhead's portions of the Anaconda-Pintler and Lee Metcalf Wildernesses, two areas recommended for addition to the Anaconda-Pintler Wilderness (Storm Lake and the Anaconda-Pintler Addition), and three areas recommended for Wilderness (the West Big Hole, Torrey Mountain (East Pioneers), and Italian Peaks). Thus there will be five Wildernesses on the Beaverhead National Forest:

- Anaconda-Pintler Wilderness
- Lee Metcalf Wilderness
- Italian Peaks Wilderness
- Torrey Mountain (East Pioneers) Wilderness
- West Big Hole Wilderness

Anaconda-Pintler Wilderness (72,614 acres currently classified, with the addition of Storm Lake (1,729 acres) and Hellroaring drainage (6,571 acres), this area will total 80,914 acres on the Beaverhead National Forest) -- This Wilderness is located on the northwestern part of the Forest and extends 30 miles along the Continental Divide. The entire Wilderness currently contains 157,874 acres, distributed across the Beaverhead, Bitterroot and Deerlodge National Forests. This total acreage will expand with classification of the proposed Wilderness additions. The vegetative spectrum varies from sagebrush and willow at lower elevations through aspen, subalpine fir, whitebark pine and subalpine larch at mid elevations to talus slopes, tarns, and snowfields in the alpine zone. Evidence of past valley glaciation can be observed throughout the Wilderness.

Lee Metcalf Wilderness (101,429 acres) -- This Wilderness is located on the eastern edge of the Forest and encompassess the Madison Mountain Range. The Wilderness comprises about 259,000 acres on the Beaverhead and Gallatin National Forests. Coniferous forest dominates the moist, high elevation areas of the Wilderness with tree line at about 10,000 feet and scree, talus and snowfield in the alpine cirque basins. The portion of the Wilderness on the Beaverhead NF drains into the Madison River.

Italian Peaks (Proposed) (25,664 acres) -- This Wilderness is located on the southernmost portion of the Forest and of Montana, along the Continental Divide. Once classified by Congress this Wilderness will comprise about 75,000 acres on the Beaverhead and Targhee National Forests and the Salmon District of the Bureau of Land Management. Much of the Beaverhead portion of the Wilderness lies in Nicolia and Deadman Creeks, the headwaters of which are located in a large undulating cirque basin with precipitous headwalls. The remainder is in the vicinity of Eighteen Mile Peak. Vegetation at low elevations and on south-facing slopes is grassland and sage. Mid elevations and north facing slopes are timbered. Subalpine grassland and alpine vegetation grow at the higher elevations.

Torrey Mountain (East Pioneers) (Proposed) (79,555 acres) -- This Wilderness will be located along the crest and adjacent slopes of the East Pioneer Mountain Range. This chain of mountains is comprised of many steep walled cirques with scenic mountain lakes, high rugged rocky peaks, and glacial trough valleys. The area is generally forested, with whitebark pine at high timbered elevations and lodgepole pine, Douglas fir, Engelmann spruce and subalpine fir at low and middle elevations.

West Big Hole (Proposed) (55,087 acres) -- This Wilderness will be located along the western edge of the Forest, along the Continental Divide that separates Idaho and Montana. The Wilderness is largely high alpine terrain, with forested lower east facing slopes. The area drains into the Big Hole River. High, dramatic peaks with glacial cirque basins, many containing lakes, comprise much of the Wilderness. Roughly midway between the north and south ends of the Wilderness is a patented mining claim currently under development. This area has been excluded from the Wilderness along with an access corridor.

Management Goals

Manage existing Wildernesses in accordance with the Wilderness Act of 1964 to ensure an enduring system of high quality wildernesses. Provide primitive and semi-primitive nonmotorized recreation opportunities.

Manage recommended Wildernesses to protect their wilderness characteristics and, to the extent possible, allow existing uses pending a congressional decision of final classification.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area. Detailed management direction for each Wilderness is or will be described in Appendices to the Forest Plan. These Appendices will not be bound in this document but are available for review by request.

Appendix Z - Anaconda-Pintler Wilderness
Appendix AA - Lee Metcalf Wilderness
(Detailed management direction for the three recommended Wildernesses may be developed following their classification and also considered Appendices to this Forest Plan.)

Resource Element	Standards

RECREATION

Recreation - Maintain existing primitive and semi-primitive nonmotorized settings as defined through the ROS system. The Geographical Display Areas (GDA's) show the ROS objectives for each Wilderness and Recommended Wilderness.

Area rehabilitation will be conducted if resource damage associated with recreational use occurs. Year round or seasonal area closures may be used to alleviate adverse impacts that may be associated with overuse.

Visual Quality - The visual quality objective for this Management Area is preservation.

WILDERNESS

Planning - When classified, additional Wilderness management guidance may be developed for each area and incorporated into the Forest Plan as an amendment.

Administration - Limitation and distribution of visitor use in these Wildernesses will be based on application of the Limits of Acceptable Change (LAC) process described by Stankey, et al, in The Limits of Acceptable Change (LAC) System for Wilderness Planning, Intermountain Forest and Range Experiment Station USDA-Forest Service, General Technical Report INT-176, January 1985. The LAC system provides a framework for determining the range of conditions acceptble in wilderness settings, to ensure a diversity of high quality wilderness recreation experiences is provided. It focuses on limiting change to resources that, if overused, would degrade the wilderness experience, and defines opportunities for various levels of contact with the natural scene. The concept recognizes that an area's ability to accommodate use depends on several variables, including the intensity of management, visitor behavior, timing or season of use, and elevation and habitat of the specific sites involved. The lands within the Wildernesses will be assigned to one of the four wilderness experience opportunitiy classes described in Appendix B. The management emphasis for each opportunity class is stated in the Managerial Setting portion of the description. The emphasis will be on Opportunity Classes I and II except around heavily used trail corridors.

Visitor Information - Personal contacts on-site will be emphasized. Off-site interpretation will be provided in areas where visitor use warrents the investment. Portal signs and visitor contact will emphasize "low impact" use.

WILDLIFE AND FISHERIES

Habitat Improvement - Habitat improvements will conform with Wilderness management policy and objectives.

Fish Stocking - Stocking of fish in wilderness lakes and streams will continue only where that activity has taken place in the past.

RANGE

Range Management - Existing allotments will be maintained and managed in accordance with wilderness values. Committee guidelines and policies regarding domestic livestock grazing in National Forest Wilderness areas (H.R. Report #96-1126, dated 6/24/81) are applicable. Additional permits will not be issued. Vegetative compositions will be maintained. Range forage condition, utilization, and production will be monitored to provide information regarding impacts from wildlife and domestic and recreational livestock.

Range Improvements - Existing livestock management structural improvements may be maintained. Additional structural improvements will be built when necessary to protect the wilderness resource or meet range management needs.

Nonstructural improvements will be compatible with wilderness management policy and objectives.

TIMBER

Timber Harvest - Timber harvest will not be allowed as the Wildernesses are not available for timber management.

MINERALS

Exploration and Development - The Anaconda-Pintler and the Lee Metcalf Wilderness are withdrawn from mineral entry and mineral leasing. No new mining claims may be located in these areas, and no mineral leases may be issued. Valid existing rights established in else areas prior to withdrawal are recognized, subject to stipulations that ensure compliance with the Acts that created these Wildernesses, and subject to establishment of the validity of the claims before any surface disturbing activities occur.

The Italian Peaks, Torrey Mountain (East Pioneers), and West Big Hole recommended Wildernesses and the recommended additions to the Anaconda-Pintler Wilderness (Storm Lake and the North Big Hole Addition) will be recommended for withdrawal from mineral entry and mineral leasing as of the date these Wildernesses are classified, subject to valid existing rights at that time.

Prospecting - All mineral and energy related information gathering activities, including prospecting, must be carried out in a manner compatible with the preservation of the wilderness environment.

LANDS

Special Uses - All new special use permits will comply with Wilderness management policy and objectives.

Existing structures under valid special use permits will be maintained by nonmotorized transportation and nonmechanized equipment unless there is no reasonable alternative. Use of motorized equipment or vehicles for routine maintenance would require approval of the Regional Forester.

Corridors - This Management Area is an exclusion area.

FACILITIES

Trail Construction - Trail construction may be permitted and will be accomplished with minimal disturbance of the natural environment. If compatible with management objectives for specific areas, existing trail systems may be upgraded to facilitate use and disperse users.

Trails will be maintained for the safety of the user and protection of the wilderness resource in accordance with wilderness trail standards and ROS objectives.

Trails will normally be built and maintained with nonmotorized equipment.

PROTECTION

Fire Management - This Management Area is classified as "Wilderness Fire Management Area". Fire will be allowed to play a more natural role in the Wilderness ecosystem except where such activity will be a threat to public safety, private property, or adversely affect resources adjacent to the Wilderness. Limited suppression action will be taken to protect improvements. Specific direction for the classified and recommended Wildernesses is included in the Fire Management Plan (Appendix U). In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Wilderness Areas").

Prescribed Fire - The objective of prescribed fire is to perpetuate natural wilderness ecosystems. Prescribed fire will perpetuate the natural diversity of plant and animal communities, consistent with applicable language in the enabling legislation.

Integrated Pest Management - Insects and disease conditions will be evaluated within wilderness areas. If conditions pose a significant threat to lands outside the Wilderness, control measures may be taken, with biological control given priority.

Air Quality - Air quality related values will be identified when a Prevention of Significant Deterioration (PSD) action that may impact the wilderness is received.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Wildlife habitat Improvement (structures)	.2	0
Trail reconstruction (Miles)	5	5

(About 40 additional miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground.)

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-8, 1-11, 5-1, 5-2, 6-1, 8-3, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #10 (4474 acres).

Description

This Management Area consists of the Mt. Jefferson Further Planning Area which is being evaluated for Wilderness in a joint analysis that includes the Bureau of Land Management and the Targhee and Beaverhead National Forests. The Bureau of Land Management is the lead agency.

Management Goals

Manage this further planning area to protect wilderness characteristics. To the extent possible, provide for existing uses where compatible with protecting wilderness character pending a recommendation regarding classification. If not recommended for wilderness classification, this Management Area will be assigned to Management Area 1. If recommended for wilderness management and if subsequently classified, this area will be assigned to Management Area 9.

Management Direction

In the interim, while this area is in a "further planning" category, development activities such as timber harvest, road construction, and other activities that may reduce wilderness potential of the land will be prohibited. Activities permitted by prior rights, existing law, and other established uses may continue pending final disposition of the area. This allows recreationists and other Forest users continued use of motorized equipment within these areas as permitted or controlled by off-road vehicle management plans. Although no harvesting of timber will be allowed from these areas other than for emergency reasons, standing timber on commercial forest land in the area will be used to determine potential yield. Certain exploration activities for oil and gas resources may occur for information gathering prior to completion of Forest Plans.

In addition to the direction described above and the Forest-wide Management Direction, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Dispersed Recreation - Existing dispersed recreation opportunities, as defined by the ROS clasification for the area and displayed in the Geographical Display Areas, will be maintained. Management activities will focus on maintenance of soil and water quality and protection of the wilderness attributes of the area.

Visual Quality - The visual quality objective of preservation will be assigned to this area pending a recommendation regarding wilderness classification.

RANGE

Range management - Existing permitted use will be allowed to continue. No additional permits will be issued.

TIMBER

Timber Harvest - Timber harvest will not be scheduled.

WILDLIFE

Habitat Improvement - Habitat improvements will be allowed consistent with maintenance of wilderness characteristics.

Fish Stocking - Stocking of fish in streams and lakes will be allowed only where that activity has taken place in the past.

LANDS

Corridors - This Management Area is an exclusion area.

FACILITIES

Road construction - Road construction for surface management purposes will not be allowed.

MINERALS

Oil and Gas Exploration - Only oil and gas activities for the purpose of discovering the extent of oil and gas deposits are allowed until separate Forest Service environmental analyses specifically concur with development and production activities. Oil and gas leases will include stipulations to strictly control exploration activities and minimize impacts on the roadless character and wilderness values of the area.

PROTECTION

Fire Management - This Management Area is classified as an "Observation Fire Management Area". Fires will be allowed to play a more natural role except where such activity will be a threat to public safety or adversely affect existing improvements or resources within this or adjacent Management Areas. Additional direction is contained in the Fire Management Plan (Appendix U.). In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Observational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions may be used as resource improvement tools.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	 Decade 2 (Projected)

No management practices are scheduled.

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 5-1, 5-2, 6-1, 8-3, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #11 (24,716 acres).

Description

This Management Area consists of riparian areas; that is, lakes, lakeside lands, streams and the adjoining lands that are dominated by riparian vegetation. The width of the components of this Management Area varies and is determined by riparian vegetation and valley bottom width but is a minimum of 100 feet each side of the associated water body. The area is often nearly flat and subject to periodic flooding. This Management Area lies within existing livestock grazing allotments.

Management Goals

Manage riparian areas for the benefit of riparian dependent resources, including such resources as wildlife, recreation, forage, fishery and aquatic habitat, and water quality.

Maintain livestock grazing opportunities within the standards designed to protect the riparian dependent resource values.

Allow timber harvest where compatible with objectives for the above resources and with management objectives for adjacent Management Areas to provide for healthy stands of timber.

Provide opportunities to improve water quality, minimize erosion, and stabilize or protect streambanks through specifically prescribed vegetation manipulation and/or structural means.

Provide opportunities to improve fisheries and wildlife habitat through specifically prescribed vegetation manipulation and/or structural means.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Dispersed Recreation - Existing dispersed recreation sites will be managed to protect soil and water quality and to minimize site degredation.

Expansion of dispersed recreation uses will be considered and allowed where other riparian dependent resource values can be maintained.

Off-road vehicles will not be allowed where soil and vegetative damage would occur. Intensive recreation use will not be encouraged.

Recreation Facilities - Sanitation facilities constructed within riparian areas will comply with Montana State sanitation regulations. Locate facilities out of flood plains.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Management - A minimum of ten percent of the riparian area of each compartment will be maintained in old growth over time. Streamside management will be established to provide for old growth. Snags will be retained in the riparian zones at the 100 percent of optimum management level, which results in 3 snags per acre greater than 10 inches in diameter.

Habitat Improvement - Habitat improvement projects, including road management, prescribed fire, habitat improvement structures, and other techniques will be used to maintain and/or enhance the quality of big game, nongame, and fisheries habitat.

RANGE

Range Management - Maintenance of natural channels and adequate streamside vegetation will have a high priority in range allotment management plans.

Specific guidance for stream bank protection and implementation of Forest standards regarding protection of bank vegetation and water quality will be included in allotment management plans.

Range Improvements - Concentration of livestock in riparian areas will be minimized through development of livestock grazing management systems and structural improvements.

Salting for livestock distribution will occur outside of riparian areas.

Alternative water sources outside the riparian area will be developed were environmentally and economically feasible.

TIMBER

Timber Harvest - Productive forest land may be scheduled for timber harvest where adjacent to or surrounded by Management Areas which schedule timber harvest. This Management Area is suitable for timber management and will be managed to continue a healthy and diverse vegetative pattern.

Harvest Systems - Harvest methods will be designed to initiate tree selection or group tree selection harvest within an uneven aged silvicultural system. Silvicultural prescriptions will be used to allow for natural establishment of pools in the stream.

Yarding Systems - Yarding systems will be designed to protect riparian values. This may include use of cable systems, or limiting tractor logging to dry or frozen soil conditions. Best management practices will be followed.

Reforestation - Natural regeneration will be the primary method of reforestation. Planting will not be scheduled.

Thinning - Precommercial thinning will not be scheduled unless necessary to retain or enhance other resource values.

WATER

Watershed Management - Riparian vegetation, including overstory tree cover, will be managed to maintain cover and temperatures for trout habitat, maintain streambank stability, and promote filtering of overland flows. Riparian area vegetation and stream channels that have been degraded beyond the ability of the natural system to improve itself will be restored.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed along existing access roads as long as riparian values are protected.

FACILITIES

Road Construction - Road construction will be minimized in riparian zones. Best management practices will be followed to reduce sedimentation during and following construction activities.

PROTECTION

Fire Management - This Management Area is classified as a "Special Fire Management Area". Wildfire suppression response will be the same as for the Management Areas surrounding riparian areas, with control, confine, or contain fire strategy options available. Riparian ecosystem values will be maintained or enhanced. Suppression methods shall be designed to have the least effect on soil and water resources. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Special Areas").

Prescribed Fire - Prescribed burning, planned and unplanned, may be used to promote the natural condition of the riparian ecosystem and to improve wildlife habitat, including stimulation of aspen stands and willow regeneration.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Fisheries Habitat Improvements (Acres)	4	5

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-7, 1-8, 1-9, 1-10, 2-1 through 2-3, 3-1 through 3-3, 5-1, 6-1 through 6-5, 7-1 through 7-6, 8-1, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

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Management Area #12 (3349 acres).

Description

This Management Area consists of riparian areas; that is, lakes, lakeside lands, streams and the adjoining lands that are dominated by riparian vegetation. The width of the components of this Management Area varies and is determined by riparian vegetation and valley bottom width but is a minimum of 100 feet each side of the associated water body. The area is often nearly flat and subject to periodic flooding. This Management Area is located outside existing grazing allotments.

Management Goals

Manage riparian areas for their wildlife, recreation, fisheries and aquatic habitat, and water quality values.

Allow timber harvest where it is consistent with objectives for the above resources and adjacent Management Area objectives to achieve healthy stands of timber.

Provide opportunities to improve fisheries and wildlife habitat through specifically prescribed vegetation manipulation and/or structural means.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Recreation Management - Existing dispersed recreation sites will be managed to protect soil and water quality and to minimize site degredation.

Expansion of dispersed recreation uses will be considered and allowed where other riparian resource dependent values can be maintained.

Off road vehicles will not be allowed where soil and vegetative damage would occur. Intensive recreational use will not be encouraged.

Recreation Facilities - Sanitation facilities constructed in riparian areas will comply with Montana State Sanitation Regulations. Locate facilities out of flood plains.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Management - A minimum of ten percent of the riparian area of each compartment will be maintained in old growth over time. Streamside management will be established to provide for old growth. Snags will be retained in the riparian zones at the 100 percent of optimum management level, which results in 3 snags per acre greater than 10 inches in diameter.

Habitat Improvement - Habitat improvement projects, including road management , prescribed fire, habitat improvement structures, and other techniques will be used to maintain and or enhance the quality of big game, non game and fisheries habitat.

RANGE

Range Management - No grazing allotments will include these areas.

TIMBER

Timber Harvest - Productive forest land may be scheduled for timber harvest where surrounded by or adjacent to Management Areas which also schedule timber harvest. This Management Area is suitable for timber management and will be managed to continue as a healthy and deverse vegetative pattern.

Harvest Systems - Harvest systems will be designed to initiate tree selection or group tree selection harvest within an uneven-aged silvicultural system. Silvicultural prescriptions will be used to allow for natural establishment of pools in the stream.

Yarding Systems - Yarding systems will be designed to protect riparian values. This may include use of cable systems, or limiting tractor logging to dry or frozen soil conditions. Best management practices will be followed.

Reforestation - Natural regeneration will be the primary method of reforestation. Planting will not be scheduled.

Thinning - Precommercial thinning will not be scheduled unless necessary to retain or enhance other resource values.

WATER

Watershed Management - Riparian vegetation, including overstory tree cover, will be managed to maintain cover and temperatures for trout habitat, maintain streambank stability, and promote filtering of overland flows. Riparian area vegetation and stream channels that have been degraded beyond the ability of the natural system to repair itself will be restored.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed along existing access roads as long as riparian values are protected.

FACILITIES

Road Construction - Road construction will be minimized in riparian zones. Best management practices will be followed to reduce sedimentation during and following construction activities.

PROTECTION

Fire Management - This Management Area is classified as a "Special Fire Management Area". Wildfire suppression response will be the same as for the Management Areas surrounding riparian areas, with control, confine and contain fire strategy options available. Riparian ecosystem values will be maintained or enhanced. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Special Areas").

Suppression methods shall be designed to have the least effect on soil and water resources.

Prescribed Fire - Prescribed burning, planned and unplanned, may be used to promote the natural condition of the riparian ecosystem and to improve wildlife habitat, including stimulation of aspen stands and willow regeneration.

Schedule of Management Practices		Average Annual
	Decade 1 (Planned)	Decade 2 (Projected)
Fisheries Habitat Improvements (Acres)	1	2

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-7, 1-8, 1-9, 1-10, 2-1 through 2-3, 3-1 through 3-3, 5-1, 6-1 through 6-5, 7-1 through 7-6, 8-1, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #13 - (8367 acres).

Description

This Management Area consists of productive timber stands on moist sites that are suitable for timber management. Slopes are usually gentle. Springs, seeps, and wet areas may be present. These areas have high wildlife values because they contain key habitat components. Domestic livestock grazing occurs in existing allotments.

Management Goals

Allow opportunities to maintain and improve wildlife habitat and water quality while allowing timber management to provide for healthy stands of timber using uneven-aged silvicultural systems and scheduled timber harvest.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

Resource Element Standards

RECREATION

Recreation Management - A variety of dispersed recreation activities are permitted but not encouraged to avoid impacts to the sensitive sites.

Off road vehicles will not be allowed where soil and vegetative damage occur.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvement - Habitat improvement projects including road management, prescribed fire, habitat improvement structures, and other techniques will be used to maintain and or enhance the quality of wildlife habitat where compatible with other Management Area goals.

RANGE

Range Management - Maintenance of vegetation and water quality will have a high priority in range allotment plans.

Livestock grazing management systems will be used to maintain or improve vegetation and to avoid trampling and damage associated with excessive concentrations of livestock.

Range Improvement - Range improvements may be constructed to avoid excessive concentrations of livestock.

Salting for livestock will occur outside these sensitive moist areas.

TIMBER

Timber Management - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management.

Timber Harvesting - The primary silvicultural system will be uneven-aged management. Harvest will consist of selection or group selection harvest methods.

Yarding Systems - Yarding will be designed to protect soil and water resources. This may include use of cable systems, or limiting tractor yarding to dry or frozen soil conditions. Best management practices will be followed.

Reforestation - Reforestation shall be planned for natural regeneration. Planting is not scheduled but may be used to if natural regeneration fails.

Thinning - Precommercial thinning will not be scheduled.

WATER

Watershed Management - Vegetation that has been degraded beyond the ability of the natural system to repair itself will be restored.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed if resource values are protected.

FACILITIES

Road Construction - Road construction will be minimized in this Management Area. Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Wildfire suppression response will consider control or contain fire strategies. Resources will be protected from fire damage at the least cost. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Suppression methods shall be designed to have the least effect on soil and water resources.

Prescribed Fire - Prescribed fire, with planned and unplanned ignitions, may be used for range and wildlife habitat improvement and disposal of activity fuels.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Wildlife Habitat Improvement (Acres)	12	12

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-1 through 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #14 (12,139 acres).

Description

This Management Area consists of seeps, springs, and wet areas which are nonforested or unsuitable for timber management. Slopes are usually gentle. These areas have high wildlife values because they contain key habitat components. Domestic livestock grazing occurs in existing allotments.

Management Goals

Allow opportunities to maintain and improve wildlife habitat and water quality while permitting domestic livestock grazing and some recreational opportunities.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

Resource Element Standards

RECREATION

Recreation Management - A variety of dispersed recreation activities are permitted but not encouraged to avoid impacts to the sensitive sites.

Off road vehicles will not be allowed where soil and vegetative damage occur.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvement - Habitat improvement projects including road management, prescribed fire, habitat improvement structures, and other techniques will be used to maintain and or enhance the quality of wildlife habitat where compatible with other Management Area goals.

RANGE

Range Management - Maintenance of vegetation and water quality will have a high priority in range allotment management plans.

Livestock grazing management systems will be used to maintain or improve vegetation and to avoid trampling and damage associated with excessive concentrations of livestock.

Range Improvement - Range improvements may be constructed to avoid excessive concentrations of livestock.

Salting for livestock will occur outside these sensitive moist areas.

TIMBER

Timber Management - Timber harvest will not be scheduled in this Management Area. This Management Area is unsuitable for scheduled timber management. Salvage of dead, dying, or high hazard trees is permitted to prevent disease and insect population buildup or to meet other resource management goals associated with this or adjacent Management Areas.

WATER

Watershed Management - Vegetation that has been degraded beyond the ability of the natural system to repair itself will be restored.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed if resource values are protected.

FACILITIES

Road Construction - Road construction will be minimized in this Management Area. Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Wildfire suppression response will consider control, confine, or contain fire strategies. Resources will be protected from fire damage at the least cost. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Suppression methods shall be designed to have the least effect on soil and water resources.

Prescribed Fire - Prescribed fire, with planned and unplanned ignitions, may be used for range and wildlife habitat improvement and disposal of activity fuels.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Wildlife Habitat Improvement (Acres)	30	30

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-7, 1-8, 1-9, 1-10, 2-1 through 2-3, 3-1 through 3-3, 5-1, 6-1 through 6-5, 8-1, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

NOTE: There is no Management Area #15.

Management Area #16 (159,492 Acres).

Description

This area consists of those Forest lands that are available and suitable for timber production with other important resource values. Soil, slope, aspect, elevation and climatic factors vary. Vegetation varies from Douglas-fir in the dryer sites to spruce in the more moist areas. Although this area consists primarily of suitable forest land, there are inclusions of nonforest and nonproductive forest lands. The area also provides general wildlife summer range with inclusions of key wildlife habitat components. Some of the lands in this Management Area have important on-Forest and downstream water and fisheries values. Dispersed recreation opportunities are available, generally within a roaded, modified environment. Range forage is grazed by domestic livestock.

Management Goals

Emphasize cost efficient management of the timber resource while protecting longterm productivity and meeting Forest-wide standards that protect other important resource values that include water quality, fisheries habitat, wildlife habitat, and visual quality. Domestic livestock grazing, where consistant with timber management goals will be permitted. Dispersed recreation opportunities in a roaded, modified environment will be provided.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation oportunities will be provided at a low level of investment that focuses primarily on travel planning and management and trail maintenance and, in the event of disruption from timber harvest activities, trail relocation. Management activities will be oriented toward reducing the impacts associated with recreation activities on other resource values, including protection of soil and water quality.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographical Display Areas (GDA's) will be maintained. In this Management Area, the ROS objectives will generally be "roaded modified".

Recreation facilities will normally not be constructed.

Visual Quality - The visual quality objective for this Management Area is modification or maximum modification unless a portion of the Management

Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements including road management, prescribed fire, habitat improvement structures, and other techniques may be implemented where compatible with other Management Area objectives to mitigate the impacts of timber management activities on the wildlife and fisheries resources.

RANGE

Range Management - Livestock grazing will be permitted on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts. Fencing, temporary herding or other techniques may be used to protect regeneration where needed.

Range Improvements - Fencing and cattleguards will be installed to regulate movement of domestic livestock when natural barriers are breached.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will be clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation; however, planting may be scheduled on sites where natural regeneration is difficult, and in areas where natural regeneration attempts fail.

Precommercial Thinning - Precommercial thinning will be scheduled on existing and regenerated stands to control stocking and/or to improve species compositions.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed if Management Area goals are met.

FACILITIES

Road Construction - Road construction will occur to support management activities. Road construction will be to the minimum standard and density needed to achieve Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used for wildlife habitat improvement and disposal of activity fuels where needed to mitigate the impacts associated with timber management activities.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	787	2474
Clearcut (MMBF)	5.19	16.17
Shelterwood Seed Cut (Acres)	417	307
Shelterwood Seed Cut (MMBF)	2.40	1.28
Total (Acres)	1204	2781
Total (MMBF)	7.59	17.45
Reforestation (Acres)	1204	2781
Timber Stand Improvement (Acres)	382	382
Road Const/Reconstruction (Miles)	11.1 / 1.1	22.5 / ---
Wildlife Habitat Improvement (Acres)	19	19
Wildlife Habitat Improvement (Structures)	.2	.2

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* Harvest methods have been assumed based on general sivicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan."

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-1, 6-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #17 (4380 acres).

Description

This area consists of timber stands and natural openings generally occuring on slopes less than 45 percent within existing livestock allotments. Domestic livestock forage is provided by natural meadows and transitory range. Timber is available and suitable for management. Soils, aspect, elevation and climatic factors vary. Although this area consists primarily of suitable Forest land, there are inclusions of nonforest and nonproductive forest lands. Dispersed recreation opportunities are available, generally within a roaded, modified environment. Key wildlife habitat components may be present.

Management Goals

Emphasize cost efficient management of the timber and range resources while protecting long-term productivity and meeting Forest-wide standards that protect other resource values, including water quality, fisheries habitat, wildlife habitat and visual quality. Dispersed recreation opportunities in a roaded modified environment will be provided.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation oportunities will be provided at a low level of investment that focuses primarily on travel planning and management and trail maintenance and, in the event of disruption from timber harvest activities, trail relocation. Management activities will be oriented toward reducing the impacts associated with recreation activities on other resource values, including protection of soil and water quality.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographical Display Areas (GDA's) will be maintained. In this Management Area, the ROS objectives will generally be "roaded modified".

Facilities will generally not be constructed.

Visual Quality - The visual quality objective for this Management Area is modification or maximum modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements including road management, prescribed fire, habitat improvement structures, and other techniques, may be implemented where compatible with other Management Area objectives to mitigate the impacts of timber management activities or domestic livestock grazing on the wildlife and fisheries resources.

RANGE

Range Management - Livestock grazing will be permitted on transitory forage produced following timber harvest where and when potential conflicts with regeneration efforts are minimal or can be mitigated. Fencing, temporary herding or other techniques maybe used to protect regeneration where needed.

Range Improvement - Structural improvements are permitted to improve livestock distribution. Pasture and allotment boundaries should be maintained during and following timber harvest. Additional fencing will be required where natural barriers are breached by timber sales. Cultural practices and vegetative manipulation including broadcast burning may be used to maintain and enhance forage production.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will include clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation. Planting may be scheduled on sites where natural regeneration is difficult and where natural regeneration attempts fail.

Precommercial Thinning - Precommercial thinning will be scheduled on existing and regenerated stands to control stocking and/or to improve species compositions.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed if Management Area goals are met.

FACILITIES

Road Construction - Road construction will occur to support management activities. Road construction will be to the minimum standard and density needed to achieve Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used for range and wildlife habitat improvement and disposal of activity fuels where needed to mitigate the impacts of the timber and range management programs.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	22	---
Clearcut (MMBF)	.14	---
Shelterwood Seed Cut (Acres)	10	---
Shelterwood Seed Cut (MMBF)	.06	---
Total (Acres)	32	---
Total (MMBF)	.20	---
Reforestation (Acres)	32	---
Timber Stand Improvement (Acres)	1	1
Road Const/Reconstruction (Miles)	.6 / .1	--- / ---

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* Harvest methods have been assumed based on general sivicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan".

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-1, 6-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #18 (11,759) acres.

Description

These lands consists of tree stands and natural openings on slopes generally less than 45 percent, within existing livestock allotments, that are particularly suited for dispersed recreation use. Domestic livestock forage is provided by natural meadows and transitory range. The high quality recreation opportunities include hiking, recreational driving, viewing scenery, hunting, and fishing. Timber is available and suitable for management. Soils, aspect, elevation and climatic factors vary. Although this area consists primarily of suitable forest lands, there are inclusions of nonforest and nonproductive forest lands. Use of this area for high quality dispersed recreation activities is encouraged.

Management Goals

Emphasize cost efficient management of the timber and range resources while providing high quality dispersed recreation opportunities in a roaded environment. Protect long-term productivity. Meet Forest-wide standards that protect other resource values, including water quality, fisheries and wildlife habitat, and visual quality.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area:

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation oportunities will be provided with moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and, in the event of disruption from timber harvest activities, trail relocation. Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted where the existing array of other resource values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exists.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographical Display Areas (GDA's) will be maintained. In this Management Area, the ROS objectives will generally be "roaded modified".

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual quality objective for this Management Area is modification or maximum modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements including road management, prescribed fire, habitat improvement structures, and other techniques may be implemented, where compatible with other Management Area objectives, to mitigate the impacts of timber management activities or domestic livestock grazing on the wildlife and fisheries resources, or to enhance the quality of dispersed recreation opportunities.

RANGE

Range Management - Livestock grazing will be permitted on transitory forage produced following timber harvest where and when conflicts with Forest regeneration efforts are minimal or can be mitigated. Fencing, temporary herding or other techniques may be used to protect regeneration where needed.

Range Improvement - Structural improvements will be allowed to provide for livestock distribution. Pasture and allotment boundaries should be maintained during and following timber harvests. Additional fencing will be required where natural barriers are breached by timber sales. Cultural practices and vegetative manipulation, including broadcast burning will be permitted to increase production or improve species compositions.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will include clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation. Planting will be permitted on areas where natural regeneration attempts fail.

Precommercial Thinning - Precommercial thinning will be scheduled on existing and regenerated stands to control stocking and/or to improve species compositions.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed if Management Area goals are met.

FACILITIES

Road Construction - Road construction will occur to support management activities. Road construction will be to the minimum standard and density needed to meet Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used for range and wildlife habitat improvement and disposal of activity fuels where needed to mitigate the impacts of the timber and range management programs or to enhance the quality of the dispersed recreational opportunities associated with wildlife.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	119	47
Clearcut (MMBF)	.78	.30
Shelterwood Seed Cut (Acres)	24	---
Shelterwood Seed Cut (MMBF)	.14	---
Total (Acres)	143	47
Total (MMBF)	.92	.30
Reforestation (Acres)	143	47
Timber Stand Improvement (Acres)	0	0
Road Const/Reconstruction (Miles)	1.7 / --	.4 / ---
Wildlife Habitat Improvement (Acres)	10	10
Wildlife Habitat Improvement (Structures)	1.0	1.0

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* Harvest methods have been assumed based on general sivicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan."

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-1, 6-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #19 (11,216 acres).

Description

These lands consist of timber stands occuring on slopes generally less than 45 percent slope. They contain high wildlife values such as summer range, security cover, elk calving areas, or limited winter range; and occur on existing livestock grazing allotments. Timber is available and suitable for management but at a low level of intensity. Soils, aspect, elevation, and climatic factors vary. Although this area consists primarily of suitable forest land, there are inclusions of nonforest and nonproductive forest lands. Dispersed recreation opportunities associated with the wildlife and fisheries resources in a roaded, modified environment are available.

Management Goals

Maintain high quality wildlife habitat while allowing cost efficient low intensity levels of timber harvest and domestic livestock grazing. Meet Forest-wide standards that protect other resource values, including water quality, fisheries and wildlife habitat, and visual quality. Dispersed recreation opportunities in a roaded, modified environment will be provided.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

The management intent of this area is similar to that of Management Area 20 with the exception of the intensity of timber management.

Resource Element — Standards

RECREATION

Dispersed Recreation - Dispersed recreation oportunities will be provided with moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and, in the event of disruption from timber harvest activities, trail relocation. Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted where the existing array of other resource values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exists.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographical Display Areas (GDA's) will be maintained. In this Management Area, the ROS objectives will generally be "roaded-modified."

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual quality objective for this Management Area is modification or maximum modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements including road management, prescribed fire, habitat improvement structures, and other techniques, may be implemented to achieve Management Area objectives. These include mitigation of the impacts of timber management activities or domestic livestock grazing on the wildlife and fisheries resources, enhancement of the quality of dispersed recreation opportunities, or maintenance or enhancement of the wildlife and fisheries resources themselves.

RANGE

Range Management - Livestock grazing will be permitted on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or with wildlife habitat management objectives. Fencing, temporary herding and other techniques may be used to protect regeneration where needed.

Range Improvements - Structural improvements will be allowed to provide adequate livestock distribution or to protect other resources. Pasture and allotment boundaries should be maintained during and following timber harvest. Additional fencing will be required where natural barriers are breached by timber sales. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition consistent with meeting wildlife habitat objectives.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will include clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation. Planting will not be scheduled but may be allowed where natural regeneration attempts fail.

Precommercial Thinning - Precommercial thinning will not be scheduled.

LANDS

Corridors - New corridor facilities and expansion of existing corridor facilities could be allowed if Management Area goals are met.

FACILITIES

Road Construction - Road construction will occur to support management activities. Road construction will be to the minimum standard and density needed to meet Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional guidance is contained in the Fire Management Plan, Appendix U. In that appendix is the situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used for range and wildlife habitat improvement and disposal of activity fuels where needed to mitigate the impacts of the timber and range management programs or to enhance the quality of wildlife habitats.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	39	59
Clearcut (MMBF)	.26	.25
Shelterwood Seed Cut (Acres)	15	---
Shelterwood Seed Cut (MMBF)	.09	---
Total (Acres)	54	59
Total (MMBF)	.35	.25
Reforestation (Acres)	54	59
Timber Stand Improvement (Acres)	---	---
Road Const/Reconstruction (Miles)	.3 / .1	.3 / ---

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* Harvest methods have been assumed based on general sivicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan".

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-1, 6-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #20 (165,049 acres)

Description

These lands consist of timber stands occurring on slopes generally less than 45 percent slope. They contain high wildlife values such as summer range, security cover, elk calving areas, or limited winter range; and occur on existing livestock grazing allotments. Timber is available and suitable for management at a moderate level of intensity. Soils, aspect, elevation, and climatic factors vary. Although this area consists primarily of suitable forest land, there are inclusions of nonforest and nonproductive forest lands. Dispersed recreation opportunities associated with the wildlife and fisheries resources in a roaded modified environment are available.

Management Goals

Maintain high quality wildlife habitat while allowing cost efficient moderate intensity levels of timber harvest (that include cultural treatments) and domestic livestock grazing. Meet Forest-wide standards that protect other resource values, including water quality, fisheries and wildlife habitat, and visual quality. Dispersed recreation opportunities in a roaded, modified environment will be provided.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

The management intent of this area is similar to that of Management Area 19 but with a higher intensity of timber management.

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided with moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and, in the event of disruption from timber harvest activities, trail relocation. Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted where the existing array of other resource values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exist.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographical Display Areas (GDA's) will be maintained. In this Management Area, the ROS objectives will generally be "roaded modified".

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual quality objective for this Management Area is modification or maximum modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements including road management, prescribed fire, habitat improvement structures, and other techniques, may be implemented to achieve Management Area objectives. These include mitigation of the impacts of timber management activities or domestic livestock grazing on the wildlife and fisheries resources, enhancement of the quality of dispersed recreation opportunities, or maintenance or enhancement of the wildlife and fisheries resources themselves.

RANGE

Range Management - Livestock grazing will be permitted on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or with wildlife habitat management objectives. Fencing, temporary herding and other techniques may be used to protect regeneration where needed.

Range Improvements - Structural improvements will be allowed to provide adequate livestock distribution or to protect other resources. Pasture and allotment boundaries should be maintained during and following timber harvest. Additional fencing will be required where natural barriers are breached by timber sales. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition consistent with meeting wildlife habitat objectives.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will include clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation; however planting will be scheduled on sites where natural regeneration is difficult and in areas where natural regeneration attempts fail.

Precommercial Thinning - Precommercial thinning will be scheduled on existing and regenerated stands to control stocking and/or to improve species compositions.

LANDS

Corridors - Corridor facilities may be constructed if Management Area goals are met.d.

FACILITIES

Road Construction - Road construction and reconstruction will occur to support management activities. Road construction will be to the minimum standard and density needed to meet Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used for range and wildlife habitat improvement and disposal of activity fuels where needed to mitigate the impacts of the timber and range management programs or to enhance the quality of wildlife habitats.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	654	559
Clearcut (MMBF)	4.30	2.55
Shelterwood Seed Cut (Acres)	212	153
Shelterwood Seed Cut (MMBF)	1.22	.46
Total (Acres)	866	711
Total (MMBF)	5.52	3.01
Reforestation (Acres)	866	711
Timber Stand Improvement (Acres)	237	237
Road Const/Reconstruction (Miles)	11.0 / 1.4	3.9 / ---
Wildlife Habitat Improvement (Acres)	10	10
Wildlife Habitat Improvement (Structures)	1.4	1.5

(About 7 miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground).

These miles of trail will be removed from this Management Area and placed in Management Area #29.)

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*Harvest methods have been assumed based on general silvicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan".

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-1, 6-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA #21 (28,974 acres).

Description

This area consists of timber stands which contain high wildlife values such as key summer range, elk calving areas, security cover or limited winter range. These timbered areas are generally located outside existing grazing allotments. Timber is available and suitable for management at a moderate level of intensity. Soils, aspect, elevation, slope, and climatic factors vary. Although this area consists primarily of suitable forest land, there are inclusions of nonforest and nonproductive forest lands. Dispersed recreation opportunities associated with the wildlife and fisheries resources in a roaded, modified environment are available.

Management Goals

Maintain high quality wildlife habitat while allowing cost efficient moderate intensity timber management (that includes cultural treatments). Meet Forest-wide standards that protect other resource values, including water quality, fisheries and wildlife habitat, and visual quality. Dispersed recreation opportunities in a roaded, modified environment will be provided.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided with moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and, in the event of disruption from timber harvest activities, trail relocation. Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted where the existing array of other resource values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exist.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographical Display Areas (GDA's) will be maintained. In this Management Area, the ROS objectives will generally be "roaded modified".

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual quality objective for this Management Area is modification or maximum modification unless a portion of the Management

Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements including road management, prescribed fire, habitat improvement structures, and other techniques, may be implemented to achieve Management Area objectives. These include mitigation of the impacts of timber management activities on the wildlife and fisheries resources, enhancement of the quality of dispersed recreation opportunities, or maintenance or enhancement of the wildlife and fisheries resources themselves.

RANGE

Range Management - Livestock grazing may be permitted on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or with wildlife habitat management objectives and if the area is adjacent to an existing allotment. Fencing, temporary herding and other techniques may be used to protect regeneration where needed.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will include clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation; however planting will be scheduled on sites where natural regeneration is difficult and in areas where natural regeneration attempts fail.

Precommercial Thinning - Precommercial thinning will be scheduled on existing and regenerated stands to control stocking and/or to improve species compositions.

LANDS

Corridors - Corridor facilities may be constructed if Management Area goals are met.

FACILITIES

Road Construction - Road construction and reconstruction will occur to support management activities. Road construction will be to the minimum standard and density needed to meet Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used for wildlife habitat improvement and disposal of activity fuels where needed to mitigate the impacts of the timber management activities or to enhance the quality of wildlife habitats.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	273	13
Clearcut (MMBF)	1.80	.06
Shelterwood Seed Cut (Acres)	----	44
Shelterwood Seed Cut (MMBF)	----	.13
Total (Acres)	273	57
Total (MMBF)	1.80	.19
Reforestation (Acres)	273	
Timber Stand Improvement (Acres)		
Road Const/Reconstruction (Miles)	3.0 / .8	.3 / ---

*Harvest methods have been assumed based on general silvicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan".

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA #22 (64,315 acres).

Description

These lands are generally nonforested or sparsely forested with slopes less than 45 percent within existing livestock grazing allotments. The lands containing the most productive and heavily used portions of range allotments are suitable for high intensity range management practices. These areas generally have high livestock capacity and high levels of investment programmed for structural and nonstructural improvements. Dispersed recreation opportunities, particularly hunting and fishing, and recreational "driving" or trail biking are available in portions of this Management Area.

Management Goals

Maintain or improve range vegetative condition and livestock forage productivity through management and cultural practices. Meet Forest-wide standards that ensure protection of other resource values including water quality, fisheries, and wildlife habitat. Provide an array of dispersed recreation opportunities, generally in a semi-primitive or roaded natural appearing setting.

Management Direction

In addition to Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided with low to moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and trail reconstruction (where resource damage is occurring). Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographic Display Areas (GDA's) will be maintained. In this Management Area the ROS objectives will generally be semi-primitive nonmotorized or motorized or roaded natural appearing.

Off-road vehicle use will be managed to prevent unacceptable resource damage or wildlife disturbance.

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual qulity objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife habitat improvements will generally not be implemented.

Big Game Winter Range - On the average thirty-five percent of available forage will be for use by domestic livestock on identified big game winter range. The specific needs of wintering big game will be addressed in allotment management plans.

RANGE

Range Management - Intensive grazing systems will be utilized to maintain or increase production of and efficient, environmentally sound utilization of livestock forage. Intensive management systems will be implemented in a cost-effective manner.

Range Improvements - Structural improvements will be constructed to provide adequate livestock distribution and/or to protect other resources. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition.

TIMBER

Timber harvest - Timber harvest will not be scheduled in this Management Area. This Management Area is not suitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up. Post and pole sales will be permitted.

LANDS

Corridors - Corridor facilities may be constructed if Management Area goals are met.

FACILITIES

Road Construction - Road construction and reconstruction may occur to support management activities, or to access adjacent Management Areas and support activities scheduled there.

Road will be built to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

PROTECTION

Fire Management - This Management Area is classified as an "Operational" Fire Management Area. Fire suppression will protect the resources from damage at the least cost using control, contain, and/or confine fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used to increase range forage production and to address encroachment by Douglas fir.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	 Decade 2 (Projected)
Range Improvements (Acres)	500	500

(About 12 miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground. These miles of trail will be removed from this Management Area and placed in Management Area #29.)

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 5-1, 5-3, 6-1 through 6-5, 8-3, 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #23 (18,214 acres).

Description

These lands are generally nonforested or sparsely forested with slopes less than 45 percent within existing livestock grazing allotments. The lands are suitable for moderate and low intensity range management practices. These acres are the less productive and used portions of existing range allotments. These areas generally have lower livestock capacity and lower levels of investment programmed for structural and nonstructural improvements than Management Area 22. Dispersed recreation opportunities, particularly hunting and fishing, and recreational "driving" or trail biking are available in some portions of this Management Area.

Management Goals

Maintain or improve range vegetative condition and livestock forage productivity through management and cultural practices at a moderate to low intensity. Meet Forest-wide standards that ensure protection of other resource values including water quality, fisheries, and wildlife habitat. Provide an array of dispersed recreation opportunities, generally in a semi-primitive setting.

Management Direction

In addition to Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element Standards

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided with low to moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and trail reconstruction (where resource damage is occurring). Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographic Display Areas (GDA's) will be maintained. In this Management Area the ROS objectives will generally be semi-primitive nonmotorized or motorized.

Off-road vehicle use will be managed to prevent unacceptable resource damage or wildlife disturbance.

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual qulity objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife habitat improvements will generally not be implemented.

Big game Winter Range - On the average thirty-five percent of available forage will be available for domestic livstock use on identified big game winter range. Specific needs of wintering big game will be addressed in allotment management plans.

RANGE

Range Management - Intensive grazing systems will be utilized to maintain or increase production of and efficient, environmentally sound utilization of livestock forage. Intensive management systems will be implemented in a cost-effective manner.

Range Improvements - Structural improvements will be constructed to provide adequate livestock distribution and/or to protect other resources. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition.

TIMBER

Timber harvest - Timber harvest will not be scheduled in this Management Area. This Management Area is not suitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up. Post and pole sales will be permitted.

LANDS

Corridors - Corridor facilities may be constructed if Management Area goals are met.

FACILITIES

Road Construction - Road construction and reconstruction may occur to support management activities, or to access adjacent Management Areas and support activities scheduled there.

Road will be built to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area. Fire suppression will protect the resources from damage at the least cost using control, contain, and/or confine fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used to increase range forage production and to address encroachment by Douglas fir.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Range Improvements (Acres)	100	100

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 5-1, 5-3, 6-1 through 6-5, 8-3, and 8-4. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #24 (361,522 acres).

Description

These lands are generally nonforested or sparsely forested with slopes less than 45 percent with significant wildlife habitat values within existing livestock grazing allotments. The lands contain the most productive and heavily used portions of range allotments and are suitable for high intensity range management practices. These areas generally have high livestock capacity and high levels of investment programmed for structural and nonstructural improvements. These lands also include some of the most valuable acres of wildlife winter range, elk calving areas, security cover, and summer range with opportunities for wildlife habitat improvement. Dispersed recreation opportunities, particularly hunting and fishing, and recreational "driving" or trail biking are available in portions of this Management Area.

Management Goals

Protect and enhance wildlife habitat condition while maintaining or improving range vegetative condition and livestock forage productivity through management and cultural practices. Meet Forest-wide standards that ensure protection of other resource values including water quality, fisheries, and wildlife habitat. Provide an array of dispersed recreation opportunities, generally in a semi-primitive or a roaded natural appearing setting.

Management Direction

In addition to Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element	Standards
RECREATION	

Dispersed Recreation - Dispersed recreation opportunities will be provided with low to moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and trail reconstruction (where resource damage is occurring). Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted whre the existing arary of other reousrce values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exist.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographic Display Areas (GDA's) will be maintained. In this Management Area the ROS objectives will generally be semi-primitive nonmotorized or motorized or roaded natural appearing.

Off-road vehicle use will be managed to prevent unacceptable resource damage or wildlife disturbance.

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Visual Quality - The visual qulity objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife habitat improvements such as road management, prescribed fire, habitat improvement structures, and other techniques, may be implemented so long as they are consistent with livestock management objectives. Improvements may be used to achieve compatibility between wildlife and livestock management objectives through mitigation or to maintain or enhance the wildlife resource itself.

Big game Winter Range - On the average thirty-five percent of available forage will be available for domestic livstock use on identified big game winter range. Specific needs of wintering big game will be addressed in allotment management plans.

RANGE

Range Management - Intensive grazing systems will be utilized to maintain or increase production of and efficient, environmentally sound utilization of livestock forage consistent with wildlife habitat management objectives. Intensive management systems will be implemented in a cost-effective manner.

If the range condition appears to be on a downward trend, monitoring will be initiated to identify the cause and, if necessary, appropriate reductions will be made in livestock numbers or the Montana Department of Fish, Wildlife and Parks will be asked to reevaluate big game population objectives for the area.

Range Improvements - Structural improvements will be constructed to provide adequate livestock distribution and/or to protect other resources. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition consistent with meeting wildlife habitat management objectives.

TIMBER

Timber harvest - Timber harvest will not be scheduled in this Management Area. This Management Area is not suitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up. Post and pole sales will be permitted.

LANDS

Corridors - Corridor facilities may be constructed if Management Area goals are met.

FACILITIES

Road Construction - Road construction and reconstruction may occur to support management activities, or to access adjacent Management Areas and support activities scheduled there.

Road will be built to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area. Fire suppression will protect the resources from damage at the least cost using control, contain, and/or confine fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used to increase range forage production and to address encroachment by Douglas fir. In key wildlife habitat areas, wildlife forage needs must be met. Prescribed fire can also be used to enhance the quality of wildlife habitats.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Wildlife Habitat Improvement (Acres)	107	107
Wildlife Habitat Improvement (Structures)	9	10
Range Improvments (Acres)	300	300
Trail Reconstruction (miles)	.2	

(About 17 miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground).

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 5-1, 5-3, 6-1 through 6-5, 8-3, and 8-4. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #25 (97,489 acres).

Description

This Management Area contains key wildlife winter and summer range habitat used as calving areas, fawning areas, or security cover in a variety of physical environments. Some of this Management Area occurs within livestock grazing allotments and currently provides livestock grazing opportunities at a low intensity with low levels of investment. Dispersed recreation opportunities in a semi-primitive setting are available and are usually associated with the wildlife and fisheries resources found in the area.

Management Goals

Provide the habitat components necessary to sustain populations of wildlife species and protect big game winter and summer range areas. Meet Forest-wide standards that ensure protection and production of other resources, including fisheries, water quality and range forage for domestic livestock use. Provide an dispersed recreation opportunities in a semi-primitive motorized or nonmotorized setting.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided with low to moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and trail reconstruction (where resource damage is occurring). Management activities will be oriented toward reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted where the existing array of other resource values is threatened with adverse impacts from dispersed recreation use or if public safety hazards exist.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographic Display Areas (GDA's) will be maintained. In this Management Area the ROS objectives will generally be semi-primitive motorized or nonmotorized.

Off-road vehicle use will be managed to prevent unacceptable resource damage or wildlife disturbance.

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Recreation activities in critical wildlife areas will be restricted if serious conflicts between wildlife and recreationists arise.

Visual Quality - The visual qulity objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife habitat improvements such as road management, prescribed fire, habitat improvement structures, and other techniques, will be used to maintain or enhance the quality and quantity of wildlife habitat and to provide a diversity of habitats for wildlife species. Habitat improvement activities may be used to mitigate the impact of domestic grazing on key wildlife habitat components.

Big game Winter Range - On the average thirty-five percent of available forage will be available for domestic livestock use on identified big game winter range. Specific needs of wintering big game will be addressed in allotment management plans.

RANGE

Range Management - Grazing systems will be utilized to ensure efficient, environmentally sound utilization of livestock forage consistent with wildlife habitat management objectives. Management systems will be implemented in a cost-effective manner.

Range Improvements - Structural improvements may be constructed to provide adequate livestock distribution and/or to protect other resources. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition consistent with meeting wildlife habitat management objectives.

TIMBER

Timber harvest - Timber harvest will not be scheduled in this Management Area. This Management Area is not suitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up. Post and pole sales will be permitted.

LANDS

Corridors - Corridor facilities may be constructed if Management Area goals are met.

FACILITIES

Road Construction - Road construction and reconstruction may occur to support management activities, or to access adjacent Management Areas and support activities scheduled there.

Road will be built to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area. Fire suppression will protect the resources from damage at the least cost using control, contain, and/or confine fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used to maintain range forage production and to address encroachment by Douglas fir. However, wildlife forage and security needs must be met first. Prescribed fire can also be used to enhance the quality of wildlife habitats.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	 Decade 2 (Projected)
Wildlife Habitat Improvements (Acres)	51	50
Wildlife Habitat Improvements (Structures)	4	4

(About 7 miles of trail reconstruction and construction would be needed for the Continental Divide Trail, once the route is located on the ground).

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 5-1, 5-3, 6-1 through 6-5, 8-3, and 8-4. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #26 (19,350 acres).

Description

These lands consist of productive timber stands suitable for timber management that contain key wildlife summer range. Timber is available and suitable for management but at a low level of intensity. Soil, aspect, slope, elevation and climatic factors vary. Although this area consists primarily of suitable forest lands, there are inclusions of nonforest and nonproductive forest lands. Key summer ranges are those lands most critical to big game, namely elk during the summer and early fall. Some of these lands lie within existing livestock allotments. Dispersed recreation opportunities are available.

Management Goals

Manage key summer range to provide habitat components necessary to maintain populations of big game while providing for healthy stands of timber using low intensity management practices. Permit domestic livestock grazing while maintaining healthy vegetative forage conditions through livestock management and cultural practices. Meet Forest standards that protect other resource values, including water quality, fisheries and wildlife habitat, and visual quality. Dispersed recreation opportunities in a roaded modified environment will be provided.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element	Standards

RECREATION

Dispersed Recreation - Dispersed recreation opportunities will be provided with low to moderate levels of investment in trail and recreational road maintenance, trailhead facilities, and trail relocation (in the event of disruption from timber management activities). Management activities will be oriented toweard reducing impacts to other resource values, including protection of soil and water quality, and toward dispersing recreationists.

Trail reconstruction can be conducted where the existing array of other resource values is threatened with adverse impacts associated with dispersed recreation use or if public safety hazards exist.

The Recreation Opportunity Spectrum (ROS) objectives depicted in the Geographic Display Areas (GDA's) will be maintained. In this Management Area the ROS objectives will generally be roaded modified.

Off-road vehicle use will be managed to prevent unacceptable resource damage or wildlife disturbance.

Trailhead facilities will be installed as necessary to disperse use throughout the area.

Recreation activities in critical wildlife areas will be restricted if serious conflicts between wildlife and recreationists arise.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements such as road management, prescribed fire, habitat improvement structures, and other techniques, will be used to maintain or enhance the quality and quantity of wildlife habitat and to provide a diversity of habitats for wildlife species. Habitat improvement activities may be used to mitigate the impact of timber management activities or domestic livestock grazing on key wildlife habitat components.

RANGE

Range Management - Grazing systems will be utilized to ensure efficient, environmentally sound utilization of livestock forage consistent with wildlife habitat management objectives. Management systems will be implemented in a cost-effective manner.

Range Improvements - Structural improvements may be constructed to provide adequate livestock distribution and/or to protect other resources. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition consistent with meeting wildlife habitat management objectives.

Pasture and allotment boundaries should be maintained during and following timber harvest. Additional fencing will be required where natural barriers are breached by timber sales.

TIMBER

Timber Harvesting - Timber harvest will be scheduled on suitable lands as this Management Area is suitable for timber management. The primary silvicultural system will be even-aged management. Harvest methods will include clearcut, shelterwood and seedtree.*

Reforestation - Natural regeneration will be the primary method of reforestation. Planting will not be scheduled.

Precommercial Thinning - Precommercial thinning to improve growth, stocking, or species compositions will not be scheduled.

LANDS

Corridors - Corridor facilities may be constructed if management area goals are met.

FACILITIES

Road Construction - Road construction will not normally occur to support range management activities but may occur to support other management activities such as timber harvest or mineral exploration and development.

Roads will be built to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

Best management practices will be followed.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area. Fire suppression will protect the resources from damage at the least cost using control, contain, and/or confine fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fires with planned and unplanned ignitions can be used to maintain range forage production and to address encroachment by Douglas fir. However, wildlife forage and security needs must be met first. Prescribed fire can also be used to enhance the quality of wildlife habitats. Activity fuels generated from timber management activities may be treated using prescribed fire.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Timber Management*		
Clearcut (Acres)	119	---
Clearcut (MMBF)	.78	---
Shelterwood Seed Cut (Acres)	24	---
Shelterwood Seed Cut (MMBF)	.14	---
Total (Acres)	143	---
Total (MMBF)	.92	---
Reforestation (Acres)	143	---
Timber Stand Improvement (Acres)	---	---
Road Const/Reconstruction (Miles)	1.2 / ---	--- / ---

*Harvest methods have been assumed based on general silvicultural principles. In plan implementation, silvicultural prescriptions will be developed prior to project activity to determine the appropriate harvest method given site specific conditions (Forest-wide standard Timber #1). Clearcut harvest methods will be used only if determined to be the optimum harvest method.

Additional information about the timber management program is included in Appendix K, "The Ten-Year Timber Sale Action Plan".

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 1-1 through 1-11, 4-1, 5-1, 5-3, 6-5, 7-1 through 7-6, 8-1 through 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #27 (8781 acres).

Description

This Management Area consists of areas of sensitive or degraded rangeland which are being rehabilitated through watershed or rangeland improvement efforts. As areas are rehabilitated they will be removed from this Management Area and placed in one of the range Management Areas (MA 22,23,24 or 25). Generally these lands are less than 45 percent in slope, on sensitive, erosive but also productive soils. Extensive domestic livestock grazing has occurred in the past.

Management Goals

Rehabilitate degraded watersheds which are producing unacceptable amounts of sediment. Where compatible with rehabilitation efforts provide limited livestock grazing. Maintain and enhance wildlife and fisheries habitat. Provide an array of dispersed recreation opportunities where compatible with rehabilitation goals.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element Standards

RECREATION

Dispersed Recreation - A variety of dispersed recreation activities are permitted where compatible with rehabilitation efforts.

Off road vehicles will not be allowed where soil and vegetative damage occur.

The Recreation Opportunity Spectrum objectives (ROS) depicted in the Geographic Display Areas will be maintained.

Visual Quality - The visual quality objective for this Management Area is modification unless a portion of the Management Area is specifically recognized as a "sensitive viewing area" and identified in Appendix D. In that case, the VQO may be higher. Direction for "sensitive viewing areas" is contained in Appendix D.

WILDLIFE AND FISHERIES

Habitat Improvements - Wildlife and fisheries habitat improvements may be implemented where compatible with restoration efforts.

RANGE

Range Management - Livestock grazing at low to moderate levels is permitted where compatible with rehabilitation efforts.

Range Improvements - Structural improvements will be allowed to provide adequate livestock distribution, to protect other resources, and/or to facilitate rehabilitation efforts. Cultural practices and vegetative manipulation, including broadcast burning, will be allowed to maintain or enhance forage production or improve species composition but will be fully compatible with the rehabilitation efforts.

TIMBER

Timber harvest - Timber harvest will not be scheduled in this Management Area. This Management Area is not suitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists and where compatible with rehabilitation efforts. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up.

LANDS

Corridors - Corridor facilities may be constructed if resource values are protected. However, opportunities for corridor facilities will be limited.

FACILITIES

Road Construction - Road construction will not be scheduled but may occur to support other management activities such as timber harvest occuring in adjacent areas or mineral exploration and development.

PROTECTION

Fire Management - This Management Area is classified as a "Special" Fire Management Area. The fire suppression response options include control and confine strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Special Areas").

Prescribed Fire - Prescribed fire using planned and unplanned ignitions may be used to maintain forage production if compatible with watershed rehabilitation efforts.

Schedule of Management Practices	Average Annual Decade 1 (Planned)	Decade 2 (Projected)
Watershed Restoration (Acres)	10	

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 3-3, 6-4, and 6-5. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #28 (5374 acres).

Description

This Management Area is the Grasshopper Recreation Complex and consists of the area surrounding and directly affected by Elkhorn Hot Springs Lodge, Grasshopper Campground, Maverick Mountain Ski Area and additional areas planned for future expansion of Maverick Mountain Ski Area. The area encompasses a wide variety of developed and dispersed recreation opportunities. Domestic livestock grazing is permitted in portions of the Management Area. Much of the area is timbered but unsuitable for scheduled timber management activities.

Management Goals

Provide for a variety of recreation activities which include downhill skiing, cross-country skiing, camping, hiking, snowmobiling, horseback riding, and swimming to support and complement present public and private developments.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element Standards

RECREATION

Developed Recreation - Areas under special use permit will be managed according to permit specific plans developed jointly by the permittee and the Forest Service.

Management of the Maverick Mountain ski area will be designed to be compatible with further expansion possibilities. Timber harvest can be used to assist in development of future runs or access to the area.

Due to the limitations of the narrow canyon, Elkhorn Hot Springs will not be expanded unless deemed environmentally acceptable and compatible with the physical location.

Construction of additional recreational residences and major reconstruction of existing residences will not be allowed. Present permits will be analyzed to determine if they should be continued or phased out.

Grasshopper campground/picnic area will be maintained.

Dispersed Recreation - Dispersed recreation opportunities in a roaded, natural appearing environment will be provided. Winter recreation opportunities will be highlighted through development and cooperative maintenance of snowmobile and crosscountry ski trails.

Opportunities for motorized and nonmotorized use will generally be continued. Areas within which motorized use is to be restricted will be determined through the Southwestern Montana Interagency Visitors Map revision process.

Trails will be maintained to accomodate visitor use and ensure protection of the investment and visitor safety.

Visual Quality - Visual quality objectives are retention except where proposed ski run clearings require more intensive modification.

WILDLIFE AND FISHERIES

Habitat Improvement - Wildlife and fisheries habitat improvement projects will generally not be developed.

RANGE

Range Management - Livestock grazing may be permitted if it does not conflict with recreational use of the area.

Range Improvements - Structural improvements will be allowed to provide adequate livestock distribution and/or to protect other resources.

TIMBER

Timber harvest - Timber harvest will not be scheduled in this Management Area. This Management Area is not suitable for scheduled timber management. Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up, or to reduce hazards to recreation users. Timber may be harvested to meet recreation management objectives.

MINERALS

Exploration and Development - Oil and gas activities will be strictly controlled to minimize conflicts with recreation activities.

LANDS

Corridors - Corridor facilities may be constructed if resource values and existing facilities are protected.

FACILITIES

Road Construction - Roads may be constructed or reconstructed as needed to meet Management Area goals. Construction will be to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

Best management practices will be followed.

Roads and trails may be closed to motorized access if necessary to meet Management Area goals.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fire with planned and unplanned ignitions can be used for wildlife habitat improvement where consistent with the Management Area's recreation management objectives.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)

No management practices are scheduled.

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 5-1,5-3, 6-1 through 6-5, 8-3, 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #29 - (78 acres).

Description

This Management Area contains those lands traversed by designated National Recreation and Scenic Trails and proposed and designated National Historic Trails.

Existing National Recreation Trails on the Beaverhead National Forest are:

--Grasshopper Ridge (Dillon District, cross-country ski trail)
--Wise River-Polaris Road (Dillon and Wise River Districts, snowmobile trail)
--Pioneer Loop (Wise River District, hiking trail)
--May Creek (Wisdom District, hiking and cross-country ski trail)

This Management Area also includes a variable width corridor containing the the Continental Divide National Scenic Trail (CDNST) which was established by Congress in P.L.95-625. Portions of the CDNST will probably follow existing trails and roads along the Continental Divide. Some sections of the trail will need to be constructed. Potential trail corridors have been identified and are displayed in on maps in Appendix G. Potential trail locations will be considered in project planning activities. Final route location will be done on approval of the CDNST Comprehensive Management Plan. The acres that are ultimately placed in this Management Area will be subtracted from the appropriate Management Areas (with the exception of the portions of the trail that are within the classified Wildernesses).

This Management Area also includes the Lewis and Clark National Historic Trail, which travels the route followed during the Lewis and Clark expedition and was formally established as a National Historic Trail by Congress. Two portions are located on the Beaverhead National Forest; one in the Trail Creek area of the Wisdom Ranger District, and the other in the Trail Creek/Lemhi Pass area of the Dillon Ranger District.

This Management Area will also include a corridor containing the NezPerce (Ne-Mee-Poo) National Historic Trail if it is established by Congress.

Management Goals

Protect the integrity of trail corridors physically and visually and provide the traveler with a wide variety of recreational experiences. Where compatible with this goal, meet Forest-wide standards that ensure protection of other resource values such as visual quality, wildlife, fisheries and water quality. Apply low intensity timber management systems to ensure healthy stands of timber. Provide moderate intensity range management where suitable and compatible with corridor protection.

Management Direction

The trail management plans prepared for the National Recreation and Scenic Trails will be followed.

Once approved, the umbrella direction contained in the CDNST Comprehensive Management Plan will be followed.

The direction contained in the Lewis and Clark National Historic Trail Comprehensive Plan will be followed.

In addition to the trail-specific management plans and the Forest-wide Management Direction included in Chapter II of this Plan, the following standards apply to this Management Area.

Resource Element	Standards

RECREATION

Trail Inventory and Planning - Potential NRT trails will be identified and evaluated for suitability. A trail management report will accompany trail nomination. Determination of needs for enhancement or protection will be identified in the management report.

Trail Construction - Trail reconstruction is allowed to upgrade existing trails. Trailhead facilities may be constructed to facilitate use.

Trail Maintenance - Trails in this Management Area have highest maintenance priority.

Dispersed Recreation - Nonmotorized use is encouraged. Motorized use may be permitted on a seasonal or case-by-case basis, as determined through the Southwestern Montana Interagency Visitors Map.

Interpretative facilities will be provided on National Historic Trails at sites of important historic events, in accordance with the appropriate trail management report.

Visual Quality - The visual sensitivity levels of these trails is level II (moderate).

RANGE

Range Management - Range allotment management plans will include stipulations for protecting the trail corridor. These stipulations include utilization standards and trailing requirements.

Livestock grazing will be permitted where grazing is allowed in adjacent Management Areas.

Range Improvements - Structural improvements are permitted where necessary to protect trail setting or integrity or to enhance the quality of the recreation opportunities provided within the trail corridors. Improvements will be designed to facilitate trail use.

TIMBER

Timber Harvest - Timber management will be scheduled within the corridor when adjacent to areas scheduled for timber management. The primary silvicultural system will be even-aged management. Harvest methods to be used include: clearcut, seedtree, shelterwood, and selection.

Management intensity will be determined by the intensity of the adjacent Management Area.

MINERALS

Exploration and Development - The trails in this Management Area will be recommended for mineral withdrawals if appropriate. Oil and gas leases will prohibit surface occupancy.

LANDS

Corridors - This Management Area is an avoidance area.

FACILITIES

Road Construction- Allow road construction or reconstruction where necessary to meet adjacent Management Area goals. Design needed roads to minimize disruption of the recreational experience of the trail user.

Road Maintenance- Maintain the "motor route" portions of the Lewis and Clark National Historic Trail to facilitate use by passenger cars and recreational vehicles during the summer season.

PROTECTION

Fire Management - This Management Area is classified a "Special Fire Management Area. Wildlife suppression responses include control and contain strategies. Suppression activities will protect the trail corridors. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Special Areas").

Prescribed Fire - Prescribed fire with planned ignitions may be used to dispose of activity fuels associated with timber management activities. Complete disposal of activity fuels in the foreground will be done as identified in the trail management report.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
No management practices (with the exception of trail maintenance) are scheduled. Once CDNST routes are located, trail reconstruction/construction can begin. About 125 miles of trail will need to be		

constructed or reconstructed. This is exclusive of the sections of the trail that run through the Wildernesses.

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 8-3. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

Management Area #30 (9778 acres).

Description

This Management Area is the Rock Creek dispersed recreation area. The Management Area contains most of the lower portion of the Rock Creek drainage on the Dillon District. The area receives heavy recreation use from both Butte and Dillon. It contains Rainbow Lake, Agnes Lake (with a grayling fishery) and Brownes Lake plus trailhead access to Waukena Lake. Brownes Lake is administered by the Montana Department of Fish, Wildlife and Parks. They maintain a campground at the lower end of the lake. Ongoing exploration has identified tungsten properties with very high potential near Sugarloaf Mountain and Storm Peak. An inactive open pit tungsten mine above Brown's Lake has tungsten reserves remaining. Domestic livestock grazing is permitted in some of this Management Area. Most of the Management Area is timbered but unsuitable for scheduled timber management activities.

Management Goals

Maximize dispersed recreation oriented to motorized vehicles along the main road in the bottom of the drainage while maximizing dispersed hiking recreation in the Agnes Lake-Rainbow Lake area. Maintain high quality wildlife and fisheries habitat. Permit domestic livestock grazing at lower elevations. Manage mineral exploration and development activities to minimize conflicts with recreation to the extent practical.

Management Direction

In addition to the Forest-wide Management Direction included in Chapter II of this Plan the following standards apply to this Management Area.

Resource Element	Standards

RECREATION

Dispersed Recreation - Promote dispersed recreation camping along the road accessing the creek bottom by providing sanitary facilities as needed.

Continue motorized access restrictions in the Agnes Lake Rainbow Lake area.

Evaluate use of the Rock Creek administrative site as a public winter recreation cabin. If this is not feasible, remove the cabin so the site can be used for dispersed recreation.

Recreation Facilities - Provide trailhead facilities for access to Waukena Lake.

Inter-Departmental Coordination - Cooperate closely with the Montana Department of Fish, Wildlife and Parks in their management of Brownes Lake and campground.

Visual Quality - This Management Area is assigned the visual quality objective of retention.

WILDLIFE

Habitat Improvement - Wildlife and fisheries habitat improvements, including road and area access management, prescribed fire, habitat improvement structures, and other techniques, will be used to maintain and /or enhance the quality of big game, nongame, and fisheries habitat. Design and implementation of the improvement projects will consider the recreation management objectives of the Management Area.

RANGE

Range Management - Domestic livestock grazing is permitted at lower elevations.

Range Improvements - Structural improvements may be constructed as needed to manage livestock in accordance with allotment management plans.

TIMBER

Timber harvest - Timber salvage and firewood removal may occur where access exists. Salvage of dead, dying or high-hazard trees is permitted to prevent disease and insect population build-up or to provide for public safety. Timber may be harvested to achieve recreation resource management objectives but harvest will not be scheduled. This Management Area is unsuitable for scheduled timber management.

MINERALS

Exploration and Development - Oil and gas activities will be strictly controlled to minimize conflicts with recreation activities. Access to the tungsten deposit in the Sugarloaf mountain area from the Lost Creek side minimizes conflicts with recreation activities in the Birch Creek drainage. Oil and gas activities will be strictly controlled to minimize conflicts with recreation activities.

LANDS

Corridors - New facilities and expansions could be allowed along existing corridors or access routes.

FACILITIES

Road Construction - Road construction and reconstruction is permitted to support recreation management goals. Construction will be to the minimum standard necessary to meet Management Area goals and protect soil and water resources.

Roads and trails may be closed to motorized access if necessary to meet Management Area goals.

PROTECTION

Fire Management - This Management Area is classified as an "Operational Fire Management Area". Fire suppression will protect the resources from damage at the least cost using control and/or contain fire suppression strategies. Additional direction is contained in the Fire Management Plan, Appendix U. In that appendix is situational guidance for the fire management strategies (see the flow diagram labeled "Appropriate Fire Suppression Response--Operational Areas").

Prescribed Fire - Prescribed fire with planned and unplanned ignitions can be used for wildlife habitat improvement where consistent with the Management Area's recreation management objectives.

Schedule of Management Practices	Average Annual	
	Decade 1 (Planned)	Decade 2 (Projected)
Wildlife Habitat Improvement (Structures)	.5	0

Monitoring Requirements

The monitoring requirements from Chapter VI that are applicable to this Management Area are: 5-1, 5-3, 6-1 through 6-5, 8-3, 8-4, and 9-1. The procedures outlined in Chapter VI will be followed to evaluate the data gathered during monitoring.

CHAPTER IV

IV. Geographic Display Areas (GDA's)

The Geographic Display Areas (GDA's) display how the goals, objectives, Forest-wide standards and Management Area Direction in the Forest Plan affect specific areas of the Beaverhead National Forest. The GDA's depict the array of management direction and activities that will occur within a given geographically cohesive area.

GDA's are lettered within planning units which are seven discontiguous areas of predominately National Forest land separated by large blocks of State, private, and other Federal lands. The Beaverhead has seven planning units - West Big Hole, Pioneers, Fleecer, Tobacco Roots, Lima, Gravelly, and Madison. These planning units and their geographic display areas can be identified on the following vicinity map.

GDA maps show Management Areas and the general location of the scheduled timber management program. They are provided for convenience and information only; more precise information is available on the Management Area Maps of Record (2.64" scale), in the Forest Supervisor's office.

The GDA maps are accompanied by a brief description of the area; its vegetative and resource characteristics; and the transportation system already in existence. Also included is a summary of the management area acres within the GDA. The GDA descriptions are not intended to evaluate or display resource potentials, or to precisely detail the characteristics, current uses, or past activities of the area.

In addition, the area access guidelines (see Forest-wide standard "Roads, #9") for the area are specified in the GDA discussion. These area access guidelines set the framework for area transporation planning, guiding the level, density, and standards of transportation facility development.
The guidelines used are as follows:

#1. No developed facilities (roads or trails) maintained for public access.
#2. Access by trails or historically developed jeep roads.
#3. Access via intermittent service roads that are physically closed to motorized access for long periods of time.
#4. Access via controlled use roads that are closed to motorized access during sensitive times of the year.
#5. Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
#6. Access via roads and trails open to motorized public access, with no restrictions.
#7. Access via fully developed roads and trails in a highly developed setting.

Finally, recreation opportunities to be managed for in a GDA are presented according to the Recreation Opportunitiy Spectrum (ROS) classification system. Primitive (represented by "P"), semi-primitive motorized ("SPM"), semi-primitive nonmotorized ("SPNM"), roaded-modified ("RM"), roaded-natural appearing ("RN"), and rural ("R") are the categories of opportunity that will guide management activities. (Further definition of the categories is presented in the Glossary, Chapter VI.)

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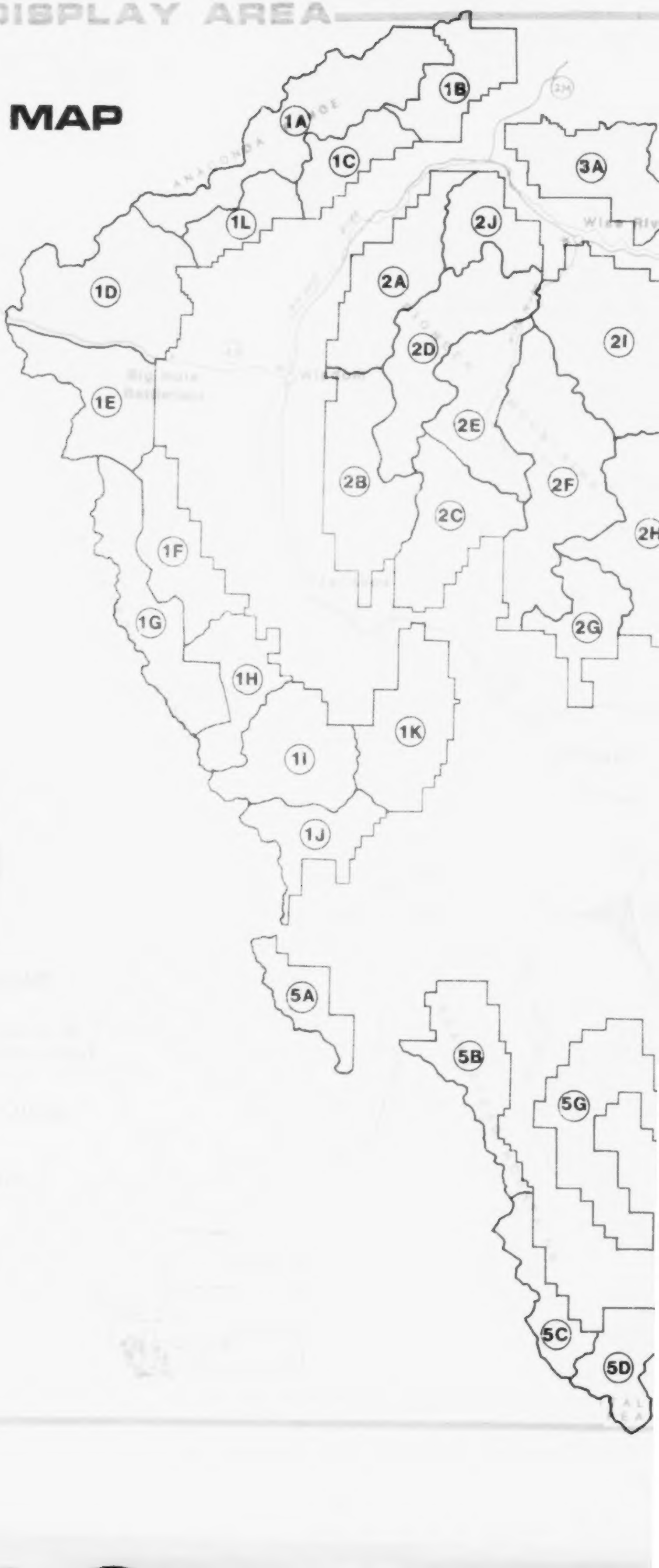
GEOGRAPHICAL DISPLAY AREA

VICINITY MAP



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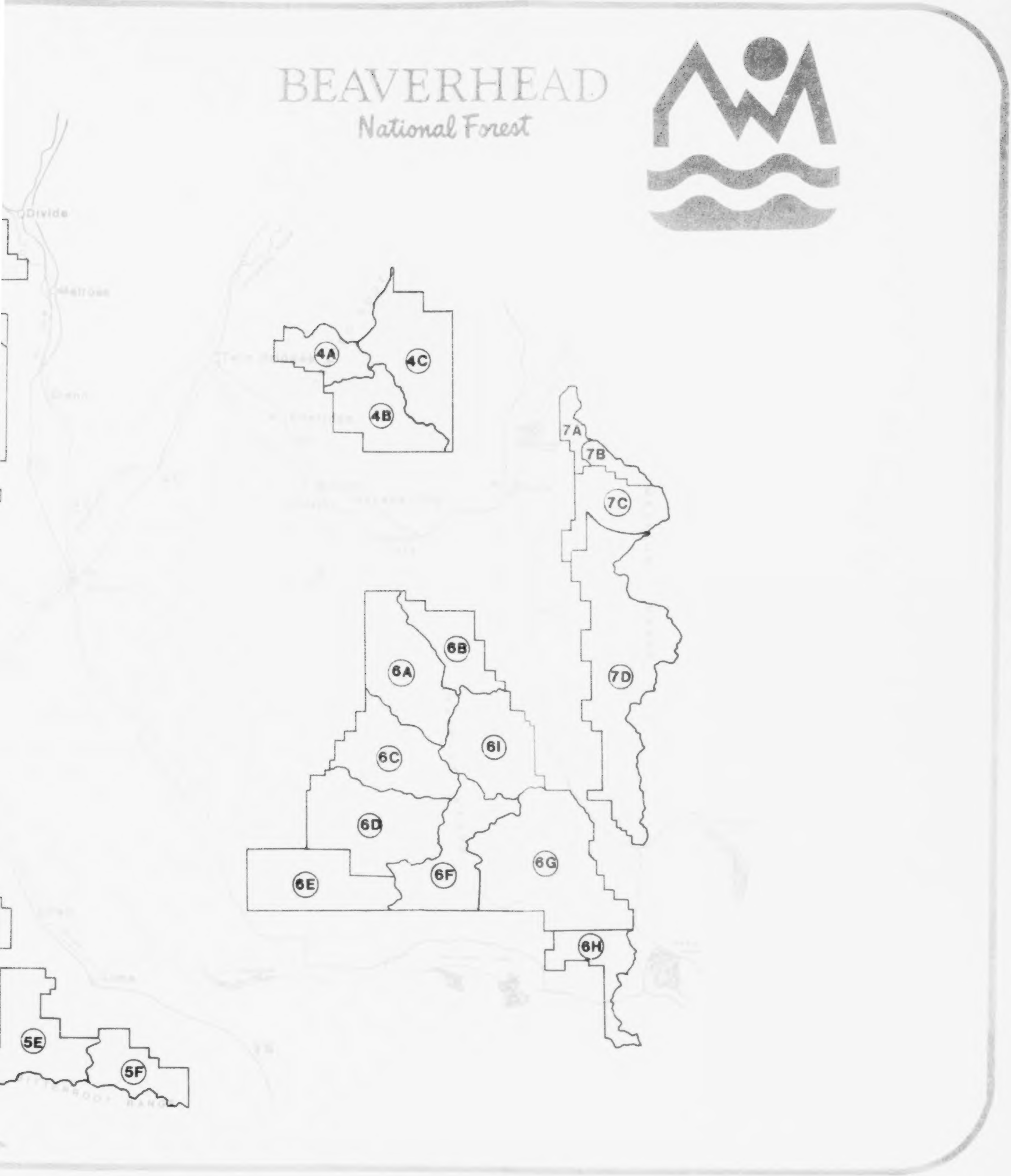
5B
5C
5D
5G
ANACONDA RANGE
Wise Riv
Big Hole Battlefield
Wisdom


BEAVERHEAD
National Forest
Divide
Melrose
Twin Bridges
Glenn
Sheridan
Lima
BITTERROOT RANGE
4A
4B
4C
5E
5F
6A
6B
6C
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6H
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7A
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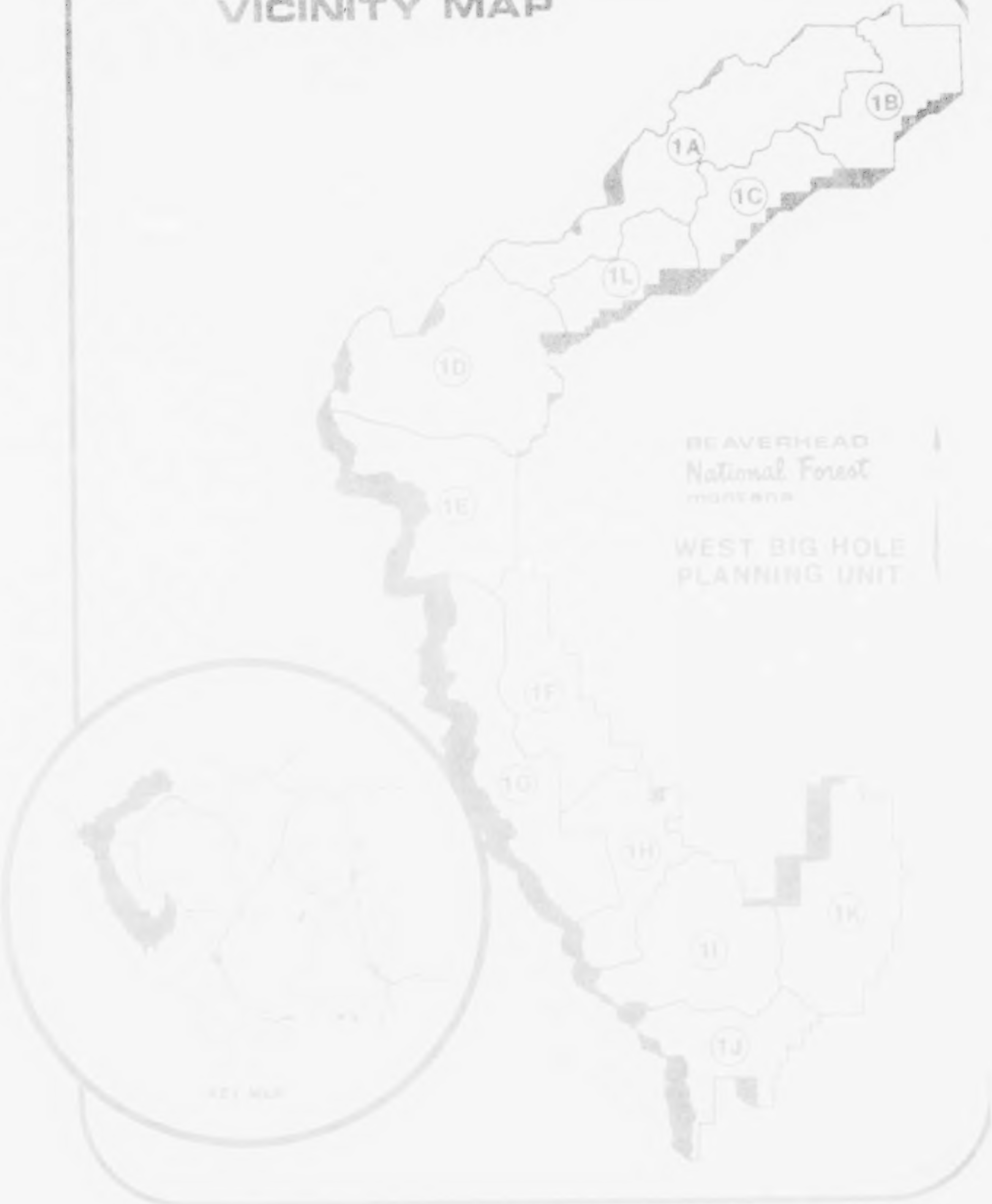
GEOGRAPHICAL DISPLAY AREA
VICINITY MAP


1A
1B
1C
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1E
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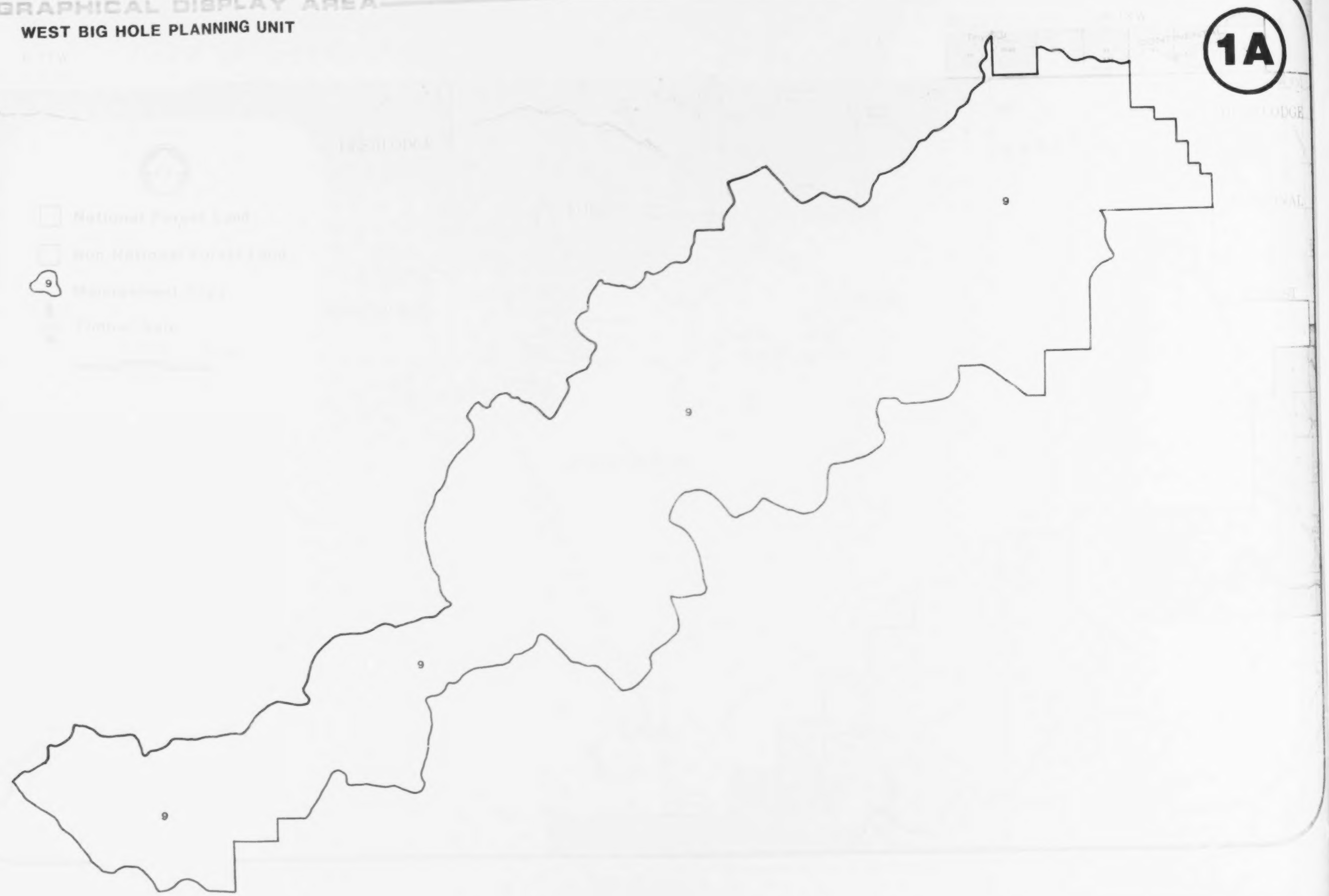
KEY MAP

BEAVERHEAD
National Forest
montana

WEST BIG HOLE
PLANNING UNIT

GEOGRAPHICAL DISPLAY AREA

WEST BIG HOLE PLANNING UNIT



BIG HOLE: GDA-1A GDA-1A contains the headwaters of the Seymour, LaMarche, Fishtrap, Mudd, Pintler, Thompson, Plimpton and Hell Roaring Creek drainages. The entire area lies mainly within the Anaconda-Pintler Wilderness, classified in December 1962. No private land is within the area. Except for an administrative site at Mystic Lake, it includes no permanent structures. This area is entirely roadless. The proposed Hell Roaring wilderness addition (RARE II, B1-001) is included in this area.

Vegetative Characteristics Vegetative cover is predominantly forest and alpine turf with a few sagebrush-grassland parks on lower elevation slopes and willow bottoms along major drainages. A mosaic of wet meadow and whitebark pine-subalpine fir forest is typical of many of the glacial cirque basins. Lodgepole pine is the dominant tree species in the mid-elevation forest, with Engelmann spruce and subalpine fir dominating the wetter valley bottoms and lower elevation cirque basins. Some Douglas-fir grows on lower elevation south-facing slopes. The forest grades into whitebark pine and subalpine fir forest at higher elevations. Timberline is approximately 8,800 feet, and much of the GDA is subalpine forest or above timberline. Some alpine larch occurs at higher elevations.

Water High annual precipitation and extensive nontimbered areas make this area an important water producer for the Forest.

Wildlife and Fish Major fishable lakes include Lion, Crystal, Mystic, Rainbow, Warren, Hicks, Lost, and Upper Seymour. Fish species include rainbow, cutthroat, and brook trout. Major streams provide good spawning grounds for the Big Hole River fishery. Big game species include elk, moose, mule deer, black bear, mountain lion, and mountain goat. Special interest species such as lynx, wolverine, and fisher also utilize the area. No suitable elk or deer winter range exists.

Range Some grassy meadows in the lower areas are included within allotments and are used for cattle grazing.

Recreation Backpacking or horse packing to the lakes with good fish populations is the major recreational activity. Some big game hunting occurs in this area.

Transportation System The existing trail system provides access to the entire area. Trailheads outside the area are located at Mussigbrod, Seymour, and Pintler Campgrounds and public access is provided at Thompson, Johnson, La Marche, West Fork Fishtrap, Mudd, and Bender Creeks. Much of the existing trail system is readily adaptable to the proposed Continental Divide National Recreation Trail.

Area Access Guidelines Access by trails or historically developed jeep roads.

Roadless Area Inventory Most of this GDA lies in the Anaconda-Pintler Wilderness (72,614 acres). B1001 contains 6,571 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	49,921	24,446	3315	0	1503	0

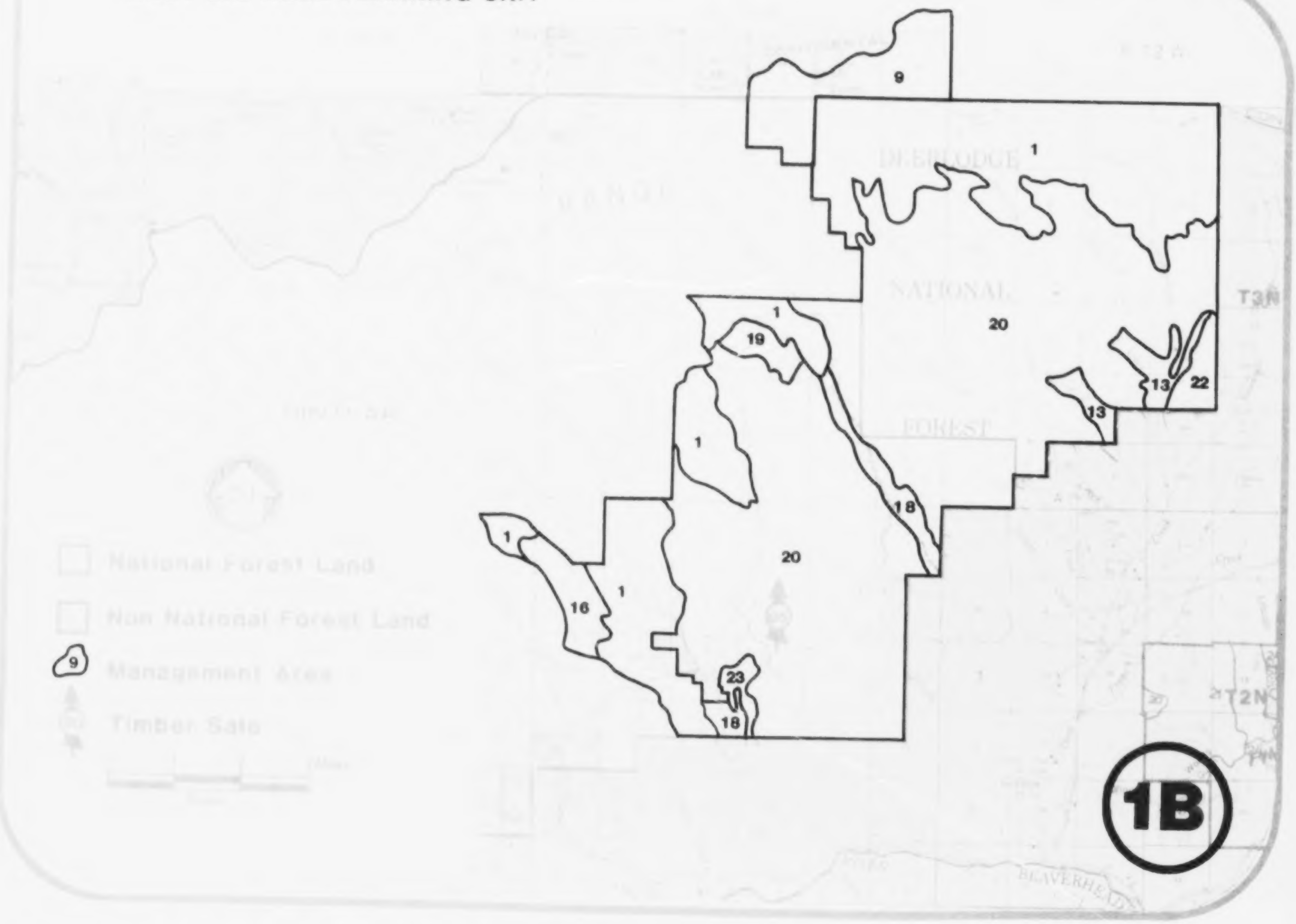
GDA-Management Area Summary
Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 1A (79,185 Acres)
MA - Acres

MA 9 - 79,185

GEOGRAPHICAL DISPLAY AREA

WEST BIG HOLE PLANNING UNIT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1
DEERLODGE
NATIONAL
FOREST
20
1
19
1
18
13
13
22
T3N
1
16
1
20
23
18
T2N
1B
BEAVERHEAD
☐ National Forest Land
☐ Non National Forest Land
9 Management Area
Timber Sale
Miles

BIG HOLE: GDA-1B

GDA-1B is adjacent to the Northeast portion of the Anaconda-Pintler Wilderness Area. The Mt. Haggin addition is contained in this GDA. There are two small inholdings of private land within the Forest boundary in this area. One is the Ancola Boy Scout Camp in Seymour Creek and the Other is in La Marche Creek. The Storm Lake area which is proposed for addition to the Anaconda Pintler Wilderness is in GDA 1B.

Vegetative Characteristics

Vegetative cover is predominantly forest with a few sagebrush-grassland parks on lower elevation slopes and willow bottoms along major drainages. A mosaic of wet meadow and whitebark pine-subalpine fir forest is typical of the many glacial cirque basins. Lodgepole pine is the dominant tree species in the mid-elevation forest, with Engelmann spruce and subalpine fir dominating the wetter valley bottoms and lower elevation cirque basins. Some Douglas-fir grows on lower elevation south-facing slopes. The forest grades into whitebark pine and subalpine fir and some alpine larch at higher elevations.

Timber

The timber sale contract for logging Mt. Haggin addition lands terminates in 1992. GDA 1B is an important wood gathering area for residents of Anaconda.

Wildlife and Fish

The area contains important summer-fall elk range. Mountain goats inhabit the more rugged terrain along the Continental Divide. No suitable elk or deer winter range exists. The area serves as an important fall elk migration corridor. Major streams provide spawning grounds for the Big Hole River fishery. Fish productivity is poor to fair in main streams. Riverine stock of grayling occur in La Marche Creek.

Range

Livestock grazing occurs from mid-June to late September. Most livestock forage occurs in areas that have been logged in the past and are considered to be transitory range.

Recreation

The Seymour Campground provides a developed recreation facility on Forest lands. Sundance Lodge, on private land in La Marche Creek, provides a base for hiking, horse back riding, fishing, big game hunting, nordic skiing, and snowmobiling on the National Forest. The entire GDA is used for snowmobiling during the winter months.

Transportation System

Seymour Creek and the LaMarche Creek Roads provide the primary access in the west part of the GDA. The Mt. Haggin addition is heavily roaded with the primary road access beginning at the Mill Creek Highway at Six Mile Creek.

Area Access Guidelines

Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. Trail #126 above Sundance Lodge has access by trails or historically developed jeep roads. The Storm Lake addition to the Anaconda/Pitler Wilderness has no developed facilities (roads or trails) maintained for public access.

Roadless Area Inventory

1-427 contains 1,808 acres. 1001B contains 3,217 acres. 1001C contains 3,274 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	72	7389	288	0	28,262	0

GDA-Management Area Summary

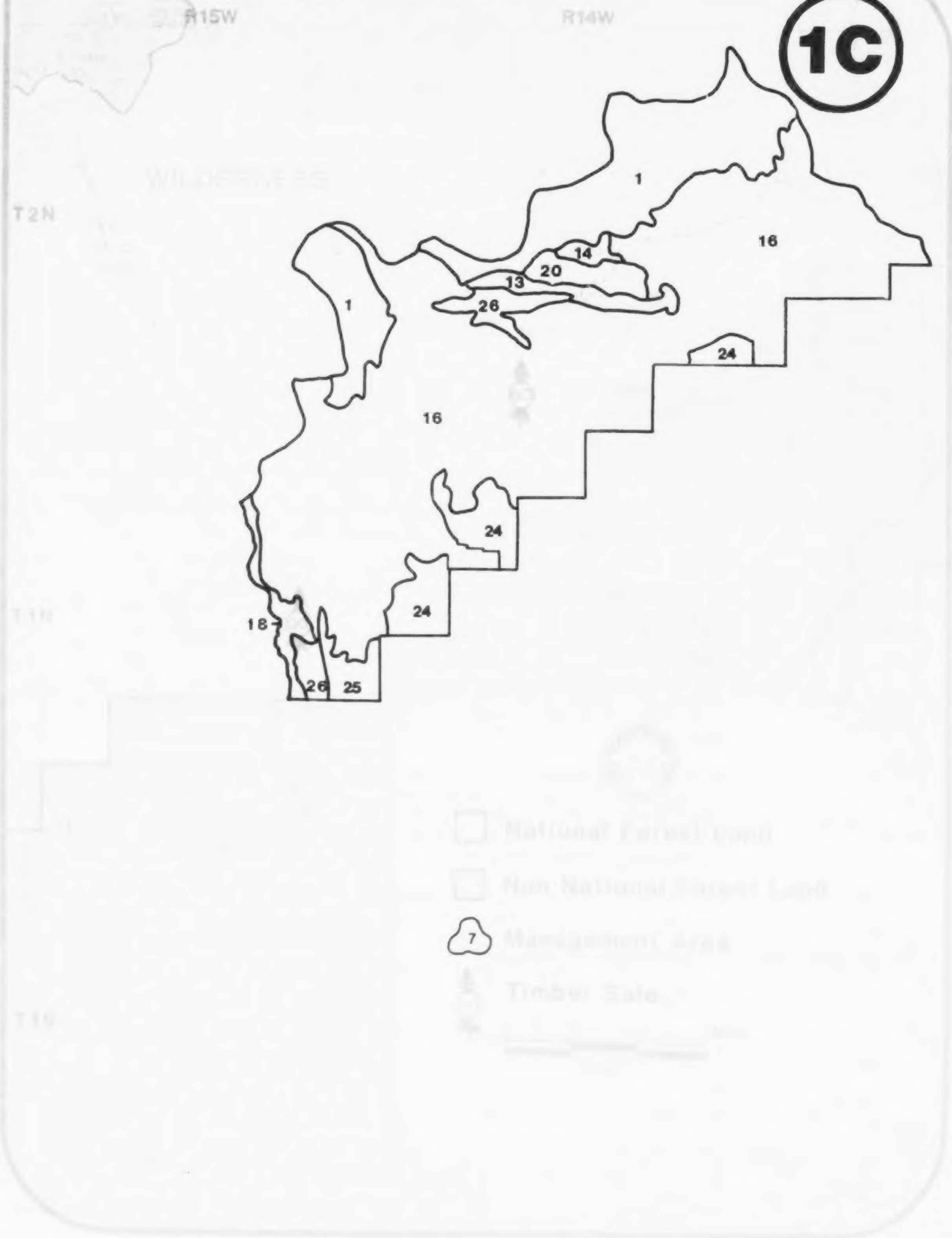
Management Area acres displayed below include acres in Management Areas 3, 11, and 12.

GDA 1B (36,011 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 10,255	MA 9 - 1729	MA 11 - 410	MA 12 - 241	MA 13 - 604
MA 16 - 696	MA 18 - 692	MA 19 - 352	MA 20 - 20,397	MA 22 - 421
MA 23 - 214				

GEOGRAPHICAL DISPLAY AREA

WEST BIG HOLE PLANNING UNIT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National Forest Land
Non National Forest Land
7
Management Area
Timber Sale

BIG HOLE: GDA-1C	GDA-1C is located east of Pintler Lake and below the Anaconda-Pintler Wilderness Area. The area extends east to LaMarche Creek and south to the Forest boundary. There are approximately 1120 acres of private land within the Forest boundary. Numerous special use irrigation ditches carry water from streams on the Forest to private hay fields outside the Forest boundary.
Vegetative Characteristics	Vegetative cover is predominantly forest, with some sagebrush parks and stringers along the Forest boundary. Valley bottoms contain willow and wet meadow at lower elevations and grade into aspen and Engelmann spruce at higher elevations. Lodgepole pine is the major forest species, but Douglas-fir is common on the lower southerly aspects.
Water	All streams are heavily used for irrigation between June and September. During low water periods, approximately 60 percent of the runoff reaches the Big Hole River. Water quality is high.
Timber	Timber has been harvested in Mudd and Fishtrap drainages. The area is important for wood gathering for local residents as well as people living in Butte and Anaconda.
Wildlife and Fish	This area is considered to be important elk summer-fall range. Major streams support brook, rainbow, and cutthroat trout. Mudd Lake supports brook and cutthroat trout. Grayling occur in Pintler Lake. Tributaries to the Big Hole River are important spawning areas.
Range	Rangeland is open sagebrush grasslands and moist bottomlands scattered throughout the area. Some transitory rangelands have been created by past logging activities. Cattle use the area from mid-June through late September each year.
Recreation	The Pintler campground provides a semi-developed recreational facility on the western edge of the GDA. Popular recreational activities are fishing and big game hunting during the summer and fall months and snowmobiling and ice fishing in the winter.
Transportation System	The area is accessed primarily by the Northside Road. The western edge of the GDA is accessed by the Pintler Creek Road.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	1001A contains 715 acres. 1001C contains 11,098 acres.

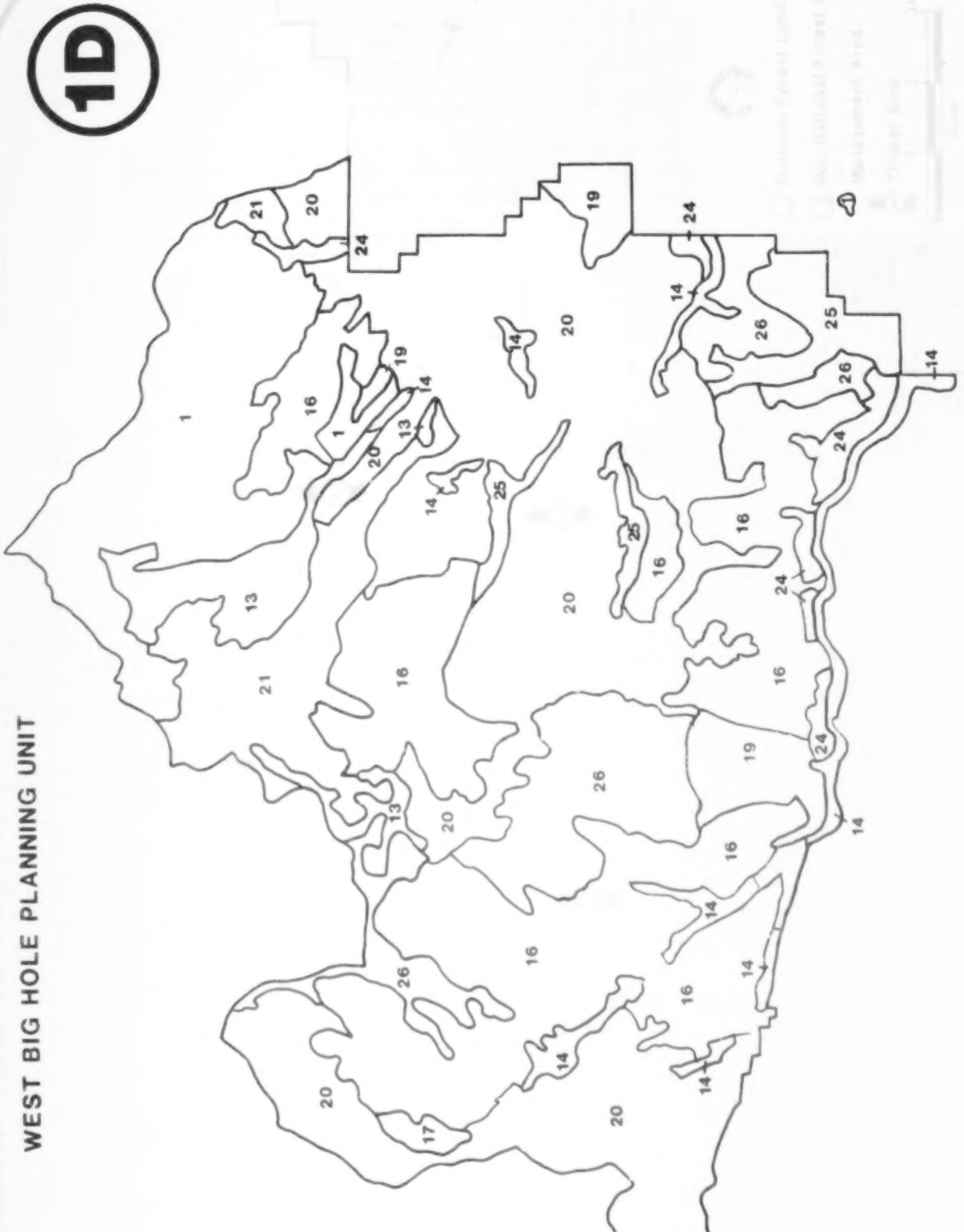
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	2791	0	0	21,069	950

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-1C (24,810 Acres)

MA - Acres	MA -Acres	MA -Acres	MA - Acres	MA - Acres
MA 1 - 4849	MA 11 - 386	MA 12 - 63	MA 13 - 391	MA 14 - 127
MA 16 - 15,934	MA 18 - 255	MA 20 - 467	MA 24 - 1220	MA 25 - 382
MA 26 - 736				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WEST BIG HOLE PLANNING UNIT

BIG HOLE: GDA-1D	GDA-1D includes lands in the Tie, Johnson and Trail Creek drainages. Private land lies along Joseph, Trail, Lower Bender and Lower Tie Creeks and is used for grazing. Two Forest administrative sites are located within the area.
Vegetative Characteristics	Vegetative cover is predominantly forest, with stringers of grassland along the many creek bottoms and small meadows scattered throughout the area. The Forest is dominantly lodgepole pine, with some Douglas-fir on south-facing slopes. Engelmann spruce and subalpine fir grow in the wet basins and along stream bottoms. Whitebark pine and subalpine fir occupy a few high elevation ridges.
Water	Water quality is high.
Wildlife and Fish	A combination of wildlife habitats occur in this management area. Summer forage and cover is provided throughout the GDA for elk, deer and moose. The wildlife habitats include elk calving and rutting areas, elk wallows, and riparian zones. Lower elevations provide some big game winter range, but most elk and deer migrate to the Salmon-Bitterroot Valleys in early winter; moose winter in the willow bottoms. Bender, Johnson, Tie, and Trail Creeks sustain small populations of cutthroat and brook trout. Most streams are spawning areas for brook trout. Fish productivity is low in upper reaches of all streams, and medium at lower elevations.
Recreation	May Creek Campground is the only developed Forest Service recreation site. Dispersed recreational pursuits and firewood cutting are significant in this area. Portions of the Nez Perce, Lewis and Clark, and proposed Continental Divide National Recreation Trails are in this GDA.
Range	Rangeland is open grassland at lower elevation and stringer meadows scattered throughout the area. Range improvements include several miles of drift fence with cattleguards at suitable locations.
Timber	Mountain pine beetle epidemics in the 1930's and sustained infections of dwarf mistletoe killed 60 percent of the mature lodgepole pine. Lodgepole pine that regenerated the open sites was subsequently infected with mistletoe.
Transportation System	Primary and secondary Forest roads provide access to and within the area. Primary access routes provide access to lower Trail, Tie and Bender Creeks. Several foot trails provide access to the unroaded parts. Johnson and Bender Trails join the trail system entering the Anaconda-Pintler Wilderness.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most auxillary roads are closed to motorized use.
Roadless Area Inventory	A1001 contains 8,789 acres. C1001 contains 1,521 acres. 1-942 contains 511 acres. 1003A contains 7,926 acres. 1003B contains 5,548 acres.

Recreation Opportunity Spectrum (Future Condition)

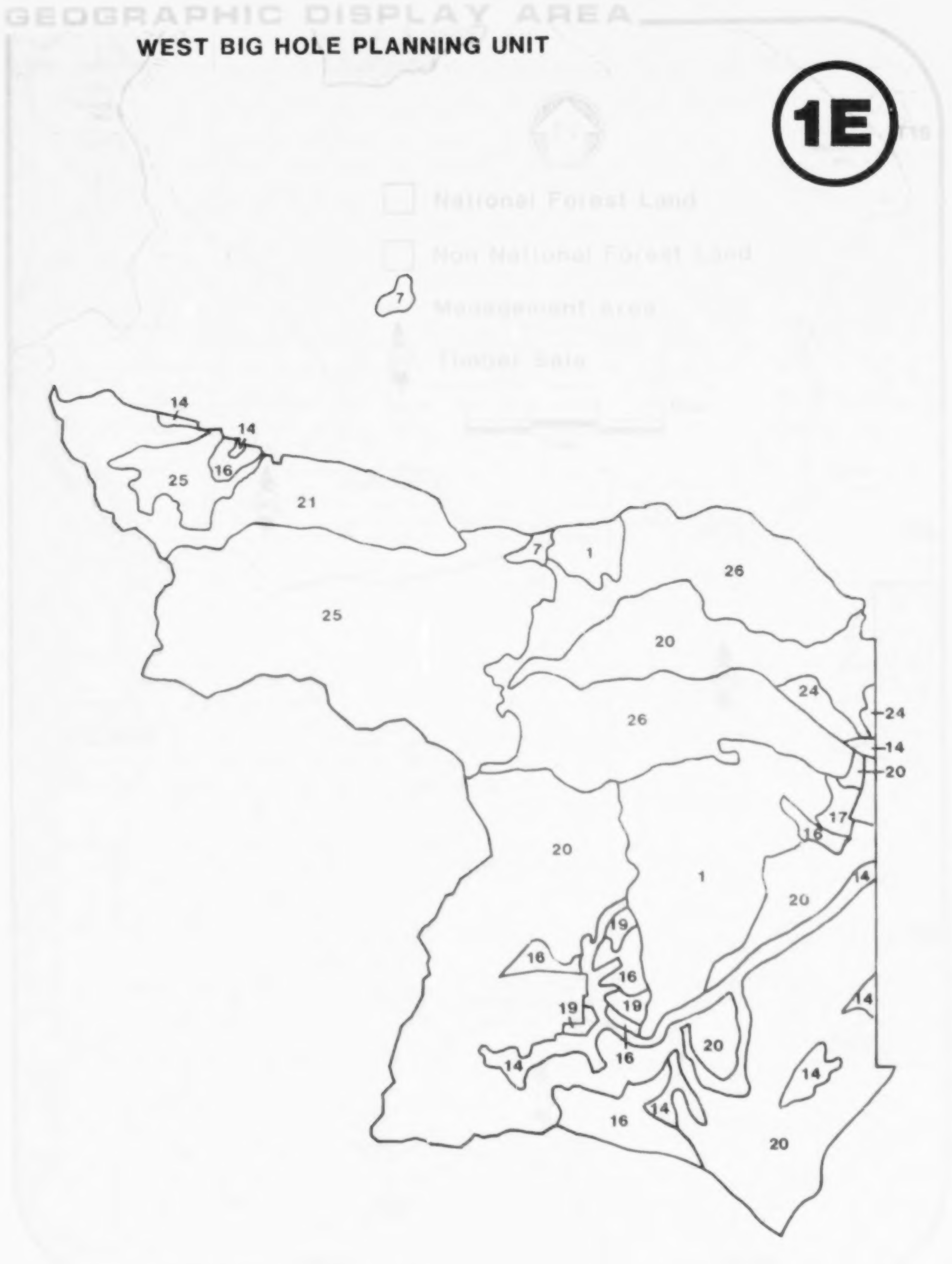
	P	SPNM	SPM	RN	RM	R
Acres -	0	1578	4544	0	69,981	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-1D (76,103 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 8571	MA 3 - 4	MA 11 - 918	MA 12 - 66	MA 13 - 2481
MA 14 - 1890	MA 16 - 19,898	MA 17 - 292	MA 19 - 2064	MA 20 - 25,236
MA 21 - 4991	MA 24 - 1162	MA 25 - 2092	MA 26 - 6437	MA 29 - 1

WEST BIG HOLE PLANNING UNIT


GEOGRAPHIC DISPLAY AREA
1E
National Forest Land
Non National Forest Land
7
Management Area
Timber Sale
14
14
16
25
21
7
1
26
25
20
24
26
24
14
20
17
16
20
1
20
14
19
16
16
19
19
14
16
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14
16
20

BIG HOLE: GDA-1E	GDA-1E consists of National Forest lands in the Ruby, Butler, and May Creek drainages. Private land is located in lower Sawpit Creek, Yank Swamp, Isaac Meadows and along Pioneer Creek. This land is used for grazing.
Vegetative Characteristics	Vegetative cover is predominantly forest, with some grassland on lower south-facing slopes. Several large grassland parks occur in the southeast corner. Dougls-fir is the major tree species on south-facing slopes; north-facing slopes are predominantly lodgepole pine, Engelmann spruce, and subalpine fir. Whitebark pine and subalpine fir grow on the high elevation ridges.
Water	Water quality is high. Many miles of irrigation ditches are present.
Wildlife and Fish	The area contains important elk summer-fall habitat. Wildlife habitats include moose winter range, elk calving and rutting areas, and riparian zones. Except for some moose winter range in scattered willow bottoms, there is very little suitable big game winter range. Elk and deer generally migrate to the Salmon Valley in early winter. Larger streams contain brook trout and most streams serve as spawning grounds for the brook trout fishery of the Big Hole drainage. Fish productivity is low in upper reaches of all streams, and medium near the Forest boundary.
Recreation	Many dispersed recreational opportunities are available. Cutting firewood is common in more accessible areas.
Range	Rangeland is open sage and grasslands at lower elevations, complimented by scattered moist bottomlands and grassland stringers.
Timber	An epidemic of mountain pine beetle in the 1930's and a long-term epidemic of dwarf mistletoe, have killed over 60 percent of the mature lodgepole pine. Opened sites have been regenerated to lodgepole pine, which has been heavily reinfected by dwarf mistletoe. The area contains considerable post and pole size material and suitable sawlog material.
Transportation System	The Anderson Mountain, Foothills, and Gibbonsville Roads provide primary access. Old narrow roads provide access from private lands along the eastern one-third and up some drainages. Several foot trails provide access to May, Butler, and Ruby Creeks. A portion of the proposed Continental Divide Trail would traverse this area.
Minerals and Energy	A significant amount of placer mining activity has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The May Creek area has access by trails or historically developed jeep roads.
Roadless Area Inventory	1-942 contains 29,820 acres. 1943A contains 4,776 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	2955	3580	0	42,301	0

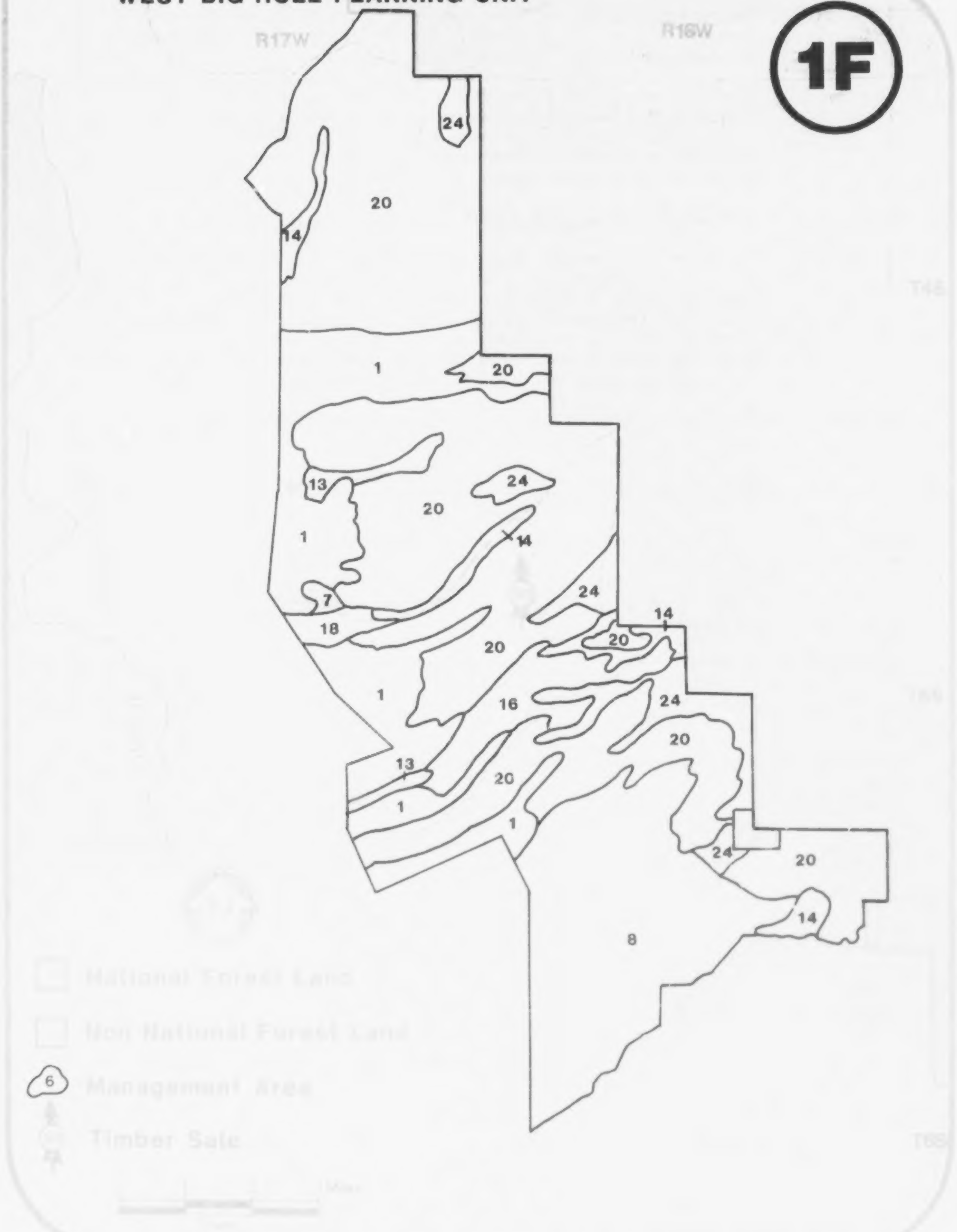
GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-1E (48,836 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
[illegible] - 55	MA 3 - 4	MA 7 - 100	MA 11 - 772	MA 12 - 243
[illegible] - 19[illegible]	MA 16 - 1601	MA 17 - 208	MA 19 - 328	MA 20 - 16,221
[illegible] - 36[illegible]	MA 24 - 391	MA 25 - 9852	MA 26 - 7689	MA 29 - 7

GEOGRAPHIC DISPLAY AREA

WEST BIG HOLE PLANNING UNIT


1F
R17W
R16W
T4S
T5S
T6S
24
20
14
1
20
13
24
20
1
14
7
24
18
14
20
20
1
16
24
13
20
20
1
1
24
20
8
14
National Forest Land
Non National Forest Land
6
Management Area
Timber Sale
Miles

BIG HOLE: GDA-1F	This GDA covers the Foothills country adjacent to the West Big Hole Proposed Wilderness area. It includes Rock Creek, Big Lake Creek, and Swamp Creek.
Vegetative Characteristics	Vegetative cover on the gentle slopes near the Forest boundary is grassland and sagebrush-grassland. Mid- elevation slopes are forested, with lodgepole pine and Douglas-fir on dryer sites, and Engelmann spruce and subalpine fir on wetter sites. Glacial valley bottoms contain Engelmann spruce and subalpine fir forest, grassland parks, and willow bottoms.
Water	Water quality is high. Shultz Reservoir is used for irrigation. Many miles of irrigation ditches occur at lower elevations.
Wildlife and Fish	Summer-fall forage and cover is provided throughout the area for deer, elk and moose. Wildlife habitats include elk calving and rutting areas. Riparian zones and a unique area of glacial deposits and water-filled potholes also exist. Most elk and deer migrate to the Salmon-Bitterroot Valley in early winter, and most moose winter in lowland willow bottoms outside the GDA. Moose, Rock, Dry Big Lake, and Big Swamp Creeks contain brook trout. Most streams are spawning areas for brook trout from the Big Hole River. Fish productivity is low in the upper reaches of all streams and moderate at lower elevations. Twin Lakes is the only fishable lake in the area and it contains lake trout, brook trout, grayling and ling.
Recreation	Twin Lakes Campground is the only developed recreation site. Dispersed recreation use is significant. The area contains a potential Continental Divide National Recreation Trail corridor
Range	Two grazing allotments are included. Cattle permits allow a summer grazing season from mid-June to October 15. Range developments include several miles of drift fences with cattleguards at desirable locations. Some grazing occurs on transitory range.
Timber	Intensive timber management was initiated in the 1960'; in Big Lake and Big Swamp Creeks. Natural regeneration has been very successful on the drier sites, but planting has been necessary on many moist sites.
Transportation System	System roads provide primary access to the area. There are additional low standard roads in several drainages. Old, narrow, pole roads provide access from private lands to the eastern third of the unit. Approximately 4 miles of system trails provide access to major drainages.
Minerals and Energy	The currently active Silver Ridge mine is located in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when axillary roads are closed to motorized use.
Roadless Area Inventory	A1943 contains 17,401 acres. 1943A contains 1,850 acres. B1943 contains 6,644 acres.

Recreation Opportunity Spectrum (Future Condition)

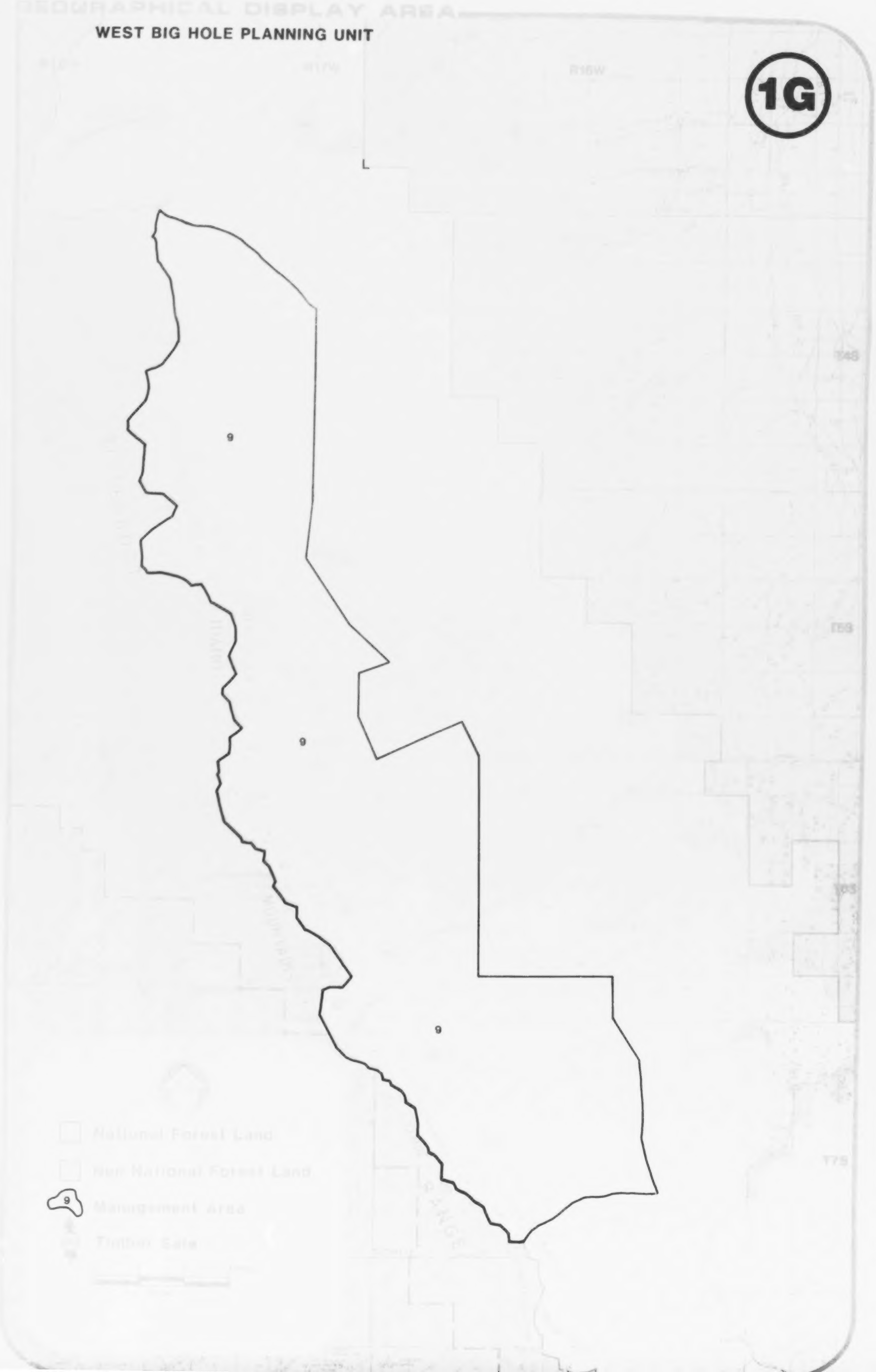
	P	SPNM	SPM	RN	RM	R
Acres -	0	3728	5750	1061	28,648	0

GDA-Management Area Summary	Management Area acres below include acres in Management Areas 4 and 5. These acreages have not been calculated for GDA's.

GDA-1F (39,187 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 6361	MA 3 - 3	MA 7 - 45	MA 8 - 6466	MA 11 - 630
MA 13 - 348	MA 14 - 949	MA 16 - 1569	MA 18 - 314	MA 20 - 20,477
MA 24 - 2025				

WEST BIG HOLE PLANNING UNIT


GEOGRAPHICAL DISPLAY AREA
1G
R16W
T4S
T5S
T6S
T7S
9
9
9
9
National Forest Land
Non National Forest Land
Management Area
Timber Sale

BIG HOLE: GDA-1G	This GDA is currently managed as the West Big Hole Proposed Wilderness.
Vegetative Characteristics	Vegetation on the mid-elevation slopes toward the eastern half of the GDA is mostly forest. Major species are lodgepole pine and Douglas-fir on dryer sites, and Engelmann spruce and subalpine fir on more moist sites. Glacial valley bottoms contain Engelmann spruce and subalpine fir forest, grassland parks and willow bottoms in the northern half of the GDA, and heavy stands of Engelmann spruce with willow along streams in the southern half. Whitebark pine and subalpine fir is the dominant cover at the higher elevations. In the high elevation glacial basins, vegetation is a mosaic of wet meadow and forest, with whitebark pine, subalpine fir and Engelmann spruce the major tree species.
Water	More than 30 percent of this GDA has little vegetative cover. It is one of the highest water producing areas on the Forest. Water qualtiy is high.
Wildlife and Fish	Most elk and deer migrate to the Salmon-Bitterroot Valley in early winter, and most moose winter in lowland willow bottoms outside the area. Nearly all streams contain brook trout. Most streams are spawning areas for brook trout from the Big Hole River. Fish productivity is low in the upper reaches of all streams and medium at lower elevations. Most of the high mountain Lakes provide good but erratic fishing for rainbow, cutthroat and brook trout.
Recreation	No developed campgrounds are contained in the area. The area currently provides excellent dispersed recreation opportunities. Snowmobiling and trail biking currently take place on much of the area.
Range	The most significant grazing occurs in the Berry Creek drainage between June 21-September 30. Some range improvements have been constructed recently to protect fragile alpine areas outside allotment boundaries.
Timber	No timber harvest is scheduled for this area as it is part of a proposed wilderness area. Evidence of past cutting can be seen in the Big Swamp and Big Lake Creek drainages within the area.
Transportation System	The only significant system road in the area is the Ajax Mine Road. There are, however, several miles of nonsystem roads and system trails. Portions of the existing trail system may be incorporated into the proposed Continental Divide National Recreation Trail.
Minerals and Energy	The currently active Ajax Mine is located in this area.
Area Access Guidelines	Access by trails or historically developed jeep roads.
Roadless Area Inventory	I1943 contains 55,087 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	43,319	8853	0	2915	0

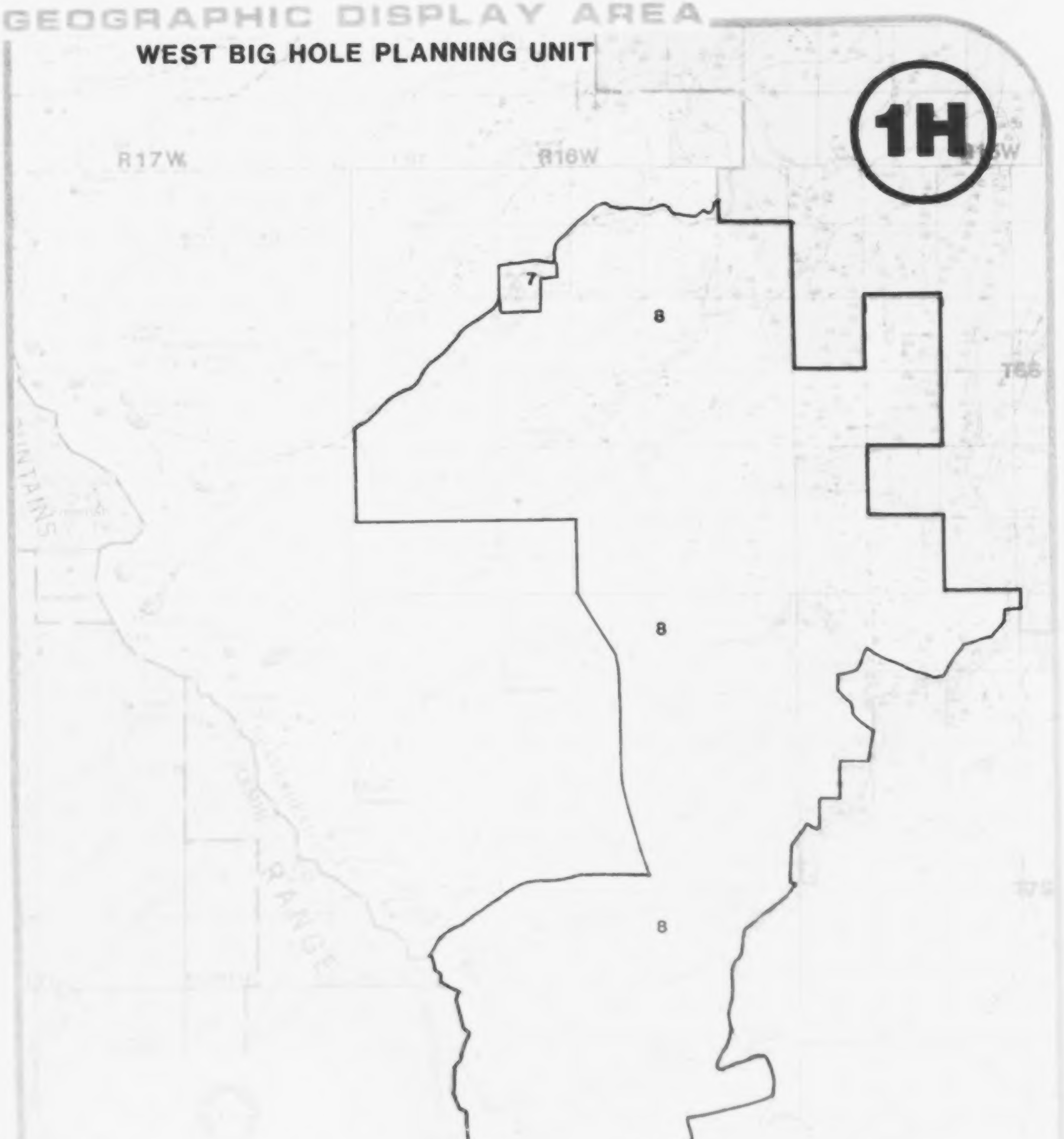
GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5. These Area acreages have not been calculated for GDA's.

GDA-1G (55,087 Acres)
MA - Acres

MA 9 - 55,087

GEOGRAPHIC DISPLAY AREA

WEST BIG HOLE PLANNING UNIT


1H
R17W
R16W
R15W
T6S
T7S
T8S
7
8
8
8
UNTAINS
RANGE
National Forest Land
Non-National Forest Land
8
Management Area
Timber Sale
Miles
R24E
SALMON

BIG HOLE: GDA-1H This GDA is adjacent to the West Big Hole Proposed Wilderness and between Miner Lake and Van Houten Lake. It includes the Jahnke and Darkhorse drainages.

Vegetative Characteristics Vegetation at lower elevations is a mosaic of forest and large grassland parks. Mid-elevations are predominantly forest, but contain small meadows. Major species are lodgepole pine, Douglas-fir and Engelmann spruce. Glacial valley bottoms contain heavy stands of Engelmann spruce, with willow along the streams. Whitebark pine and subalpine fir forest is the dominant cover at the higher elevations.

Water Water quality is high. Many miles of irrigation ditches in the unit serve the adjacent private lands.

Wildlife and Fish Summer-fall forage and cover is provided throughout the GDA for deer, elk and moose. Wildlife habitats include moose winter range, elk calving and rutting areas. Riparian zones and a unique area of glacial deposits and water-filled potholes also exist. All permanent streams contain brook trout. Most streams are spawning areas for brook trout from the Big Hole River. Fish productivity is low in the upper reaches of streams, and medium at lower elevations. High mountain lakes provide good but erratic fishing. Fish species include cutthroat, brook and rainbow trout and various hybrids.

Recreation Developed campgrounds are at Lower Miner Lake and Van Houten Lake. There are spectacular vista points along the Continental Divide and pleasing landscapes are visible from most roads and trails. There are many dispersed recreational opportunities in the area. There is some off-road vehicle use at lower elevations. Cutting firewood is common in more accessible areas.

Range Primary range is open grassland at lower elevations and scattered stringer meadows. The GDA contains three grazing allotments. The summer grazing period is from mid-June through late September. Range developments include several miles of allotment drift fences with cattleguards at desirable locations.

Timber Timber has been harvested for house logs, posts and poles since the early 1900's, but has been limited to accessible areas. Intensive timber management has not taken place in the area.

Transportation System The Miner Lake Road, Lower Bloody Dick Road and the County road to Van Houten Lake provide primary access and additional low standard roads provide access in several drainages. Several trails provide access within the area. A portion of the proposed Continental Divide National Recreation Trail traverses this area.

Minerals and Energy There is a history of past production from mines in the southern part of the GDA.

Area Access Guidelines Access by trails or historically developed jeep roads. Miner Lake and Bloody Dick areas have access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory B1943 contains 25,063 acres. C1943 contains 6,202 acres.

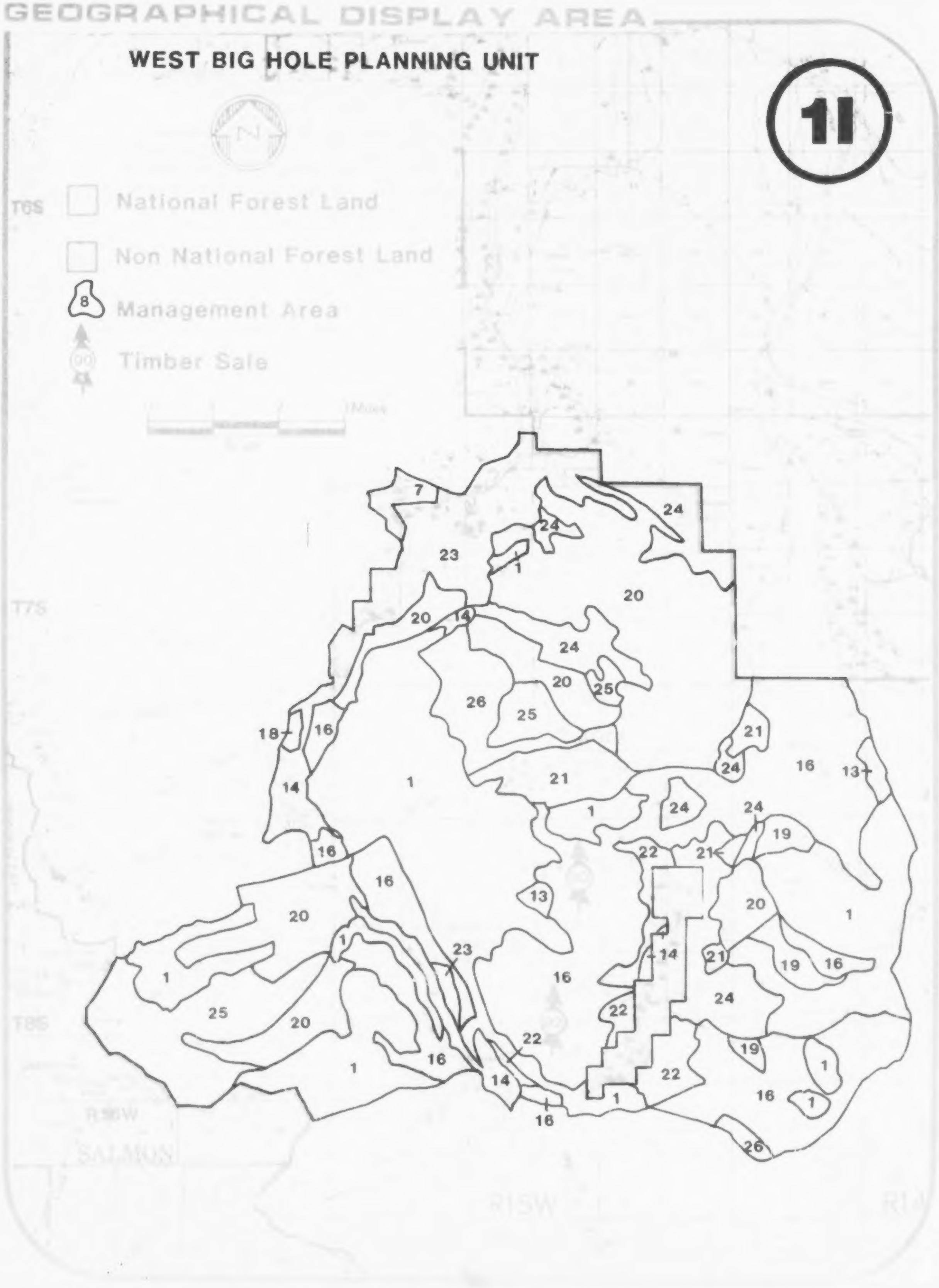
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	5409	26,902	1578	51	0

GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-1H (33,940 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 7 - 280	MA 8 - 33,285	MA 11 - 351	MA 12 - 24


GEOGRAPHICAL DISPLAY AREA
WEST BIG HOLE PLANNING UNIT
11
T6S
National Forest Land
Non National Forest Land
8
Management Area
Timber Sale
Miles
T7S
T8S
R16W
SALMON
R15W
7
23
24
24
1
20
20
14
24
20
25
26
25
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23
14
21
19
16
1
25
20
16
22
24
19
1
16
14
22
22
1
16
1
16
26

BIG HOLE: GDA-11 This GDA extends from Bloody Dick Peak to Skinner Lake and include Saginaw, Selway and the headwaters of Bloody Dick Creek.

Vegetative Characteristics Vegetation on lower elevation slopes is grassland and sagebrush-grassland with intermingled patches of forest, mostly Douglas-fir. Middle elevations are forested, with lodgepole pine, subalpine fir and Engelmann spruce the dominant species. Subalpine forest, dominantly whitebark pine, and rocky outcrops cover most of the high elevation ridges.

Water The capacity of this GDA to receive, store and produce water is fairly high. Water quality is good.

Wildlife and Fish Summer-fall forage and cover is provided throughout the area for deer, elk and moose. Wildlife habitat includes moose winter range, and major elk calving and rutting areas. Riparian zones and a unique area of glacial deposits and water-filled potholes also exist. All major streams sustain large populations of trout, with brook trout the predominant species. The area includes several lakes with fishable populations of trout.

Recreation Recreational use is primarily hunting, fishing, recreational driving, and camping. Heavy use occurs on many undeveloped sites during hunting season. A developed campground is located at Reservoir Lake. The area has potential for dispersed recreational activities.

Range The primary range is open grassland at lower elevations. Currently, cattle graze the area from mid-June through mid-October.

Timber Major timber sale activity has occurred in the Bloody Dick, Saginaw, and Selway drainages. Additional firewood, post and pole cutting has taken place through the area where access exists.

Transportation System Much of this GDA within the Selway drainage is accessible by Jeep. An old mining access route goes to the Saginaw Mine into the Horse Prairie country and down Selway Creek. Various trails provide foot access. Access to the area is provided by the Bloody Dick and Selway Creek Roads. A portion of the proposed Continental Divide Trail lies in this GDA.

Area Access Guidelines Access via controlled use road with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory 1-004 contains 8,493 acres. 1-005 contains 10,260 acres. 1943B contains 2,725 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	7601	1875	932	40,125	0

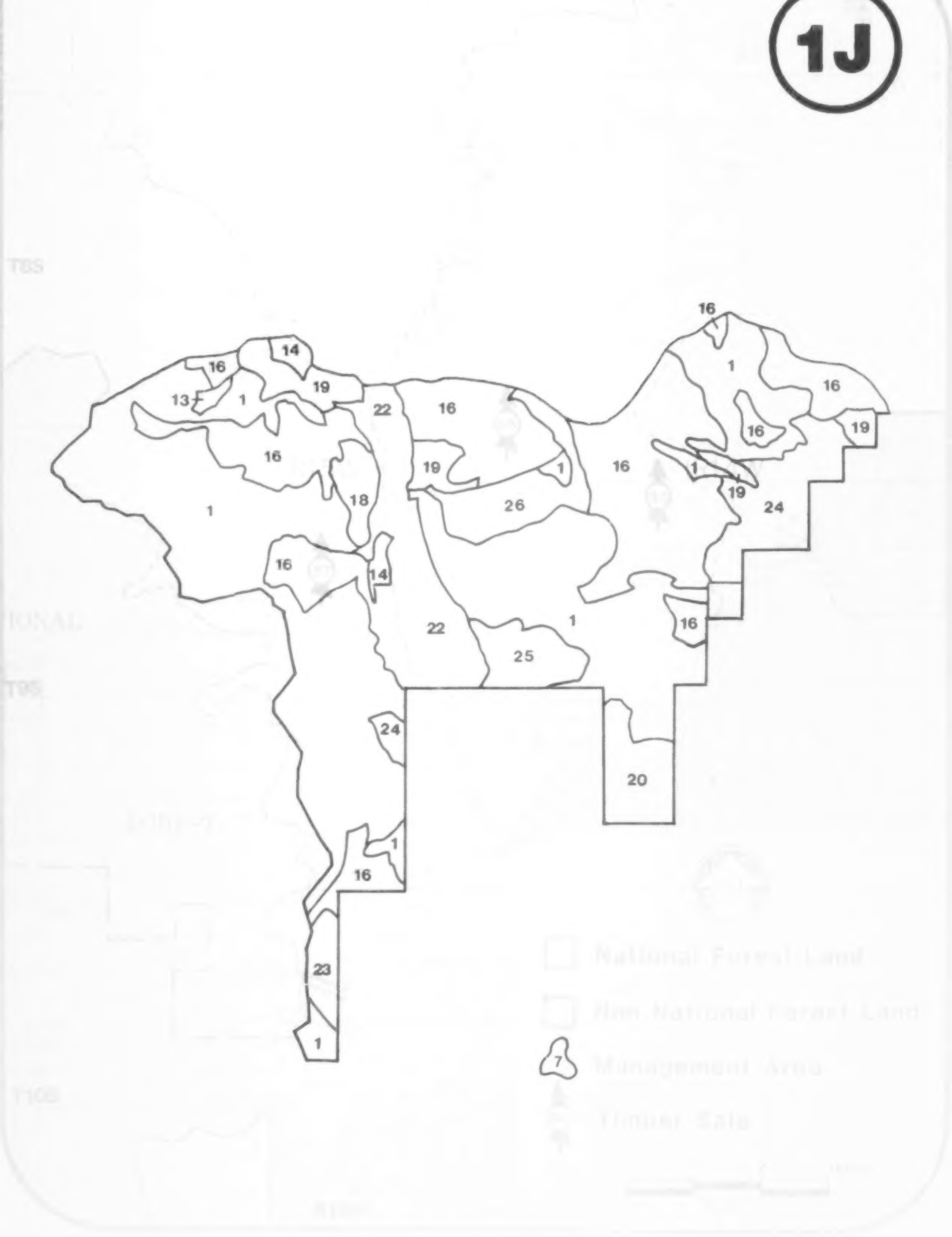
GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-11 (50,533 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 14,030	MA 3 - 1	MA 7 - 253	MA 11 - 1211	MA 12 - 12
MA 13 - 202	MA 14 - 1167	MA 16 - 11,874	MA 18 - 80	MA 19 - 658
MA 20 - 9349	MA 21 - 1205	MA 22 - 1200	MA 23 - 1386	MA 24 - 3632
MA 25 - 2962	MA 26 - 1311			

GEOGRAPHIC DISPLAY AREA

WEST BIG HOLE PLANNING UNIT


1J
T8S
T9S
T10S
16
14
16
19
13
1
22
16
16
1
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19
16
1
16
19
1
19
24
18
26
1
16
14
22
1
16
25
24
20
1
16
23
1
National Forest Land
Non-National Forest Land
7
Management Area
Timber Sale

BIG HOLE: GDA-1J	The major drainages in this GDA are Coyote Creek and the lower portion of Bloody Dick.
Vegetative Characteristics	Lower elevation slopes have sagebrush and grass cover, with scattered patches of Douglas-fir. Mid-elevation slopes are mostly forest with lodgepole pine, subalpine fir and Engelmann spruce the dominant species. With increasing elevation, whitebark pine becomes the major species.
Water	The capacity of the area to receive, store and produce water is fairly high.
Wildlife and Fish	The area serves as important elk summer-fall range with some winter range in the extreme southern portion of the GDA. Other big game species include moose, mule deer, black bear, mountain lion, and antelope. Moose winter in the lower creek bottoms. Bloody Dick Creek has an excellent brook trout fishery and is heavily used by recreationists.
Recreation	The entire GDA is used heavily for dispersed recreation, with hunting the major attraction. Heavy recreation use occurs in a corridor along Bloody Dick Creek. Recreational values in this corridor are relatively high for Type II and III recreation. The area contains a potential Continental Divide Recreation Trail corridor.
Range	Primary range is open grassland at lower elevations. Use is from mid or late June through September.
Timber	Timber harvesting has occurred on many of the lower slopes.
Minerals and Energy	A portion of the Lemhi Pass Thorium District is included in the southern part of this area.
Transportation System	The Bloody Dick Road provides access through the center of the GDA. Most of the lower areas are accessible by road. Adequate public access exists.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	1-005 contains 8,907 acres. 1943B contains 11,035 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	6990	1950	2940	20,194	0

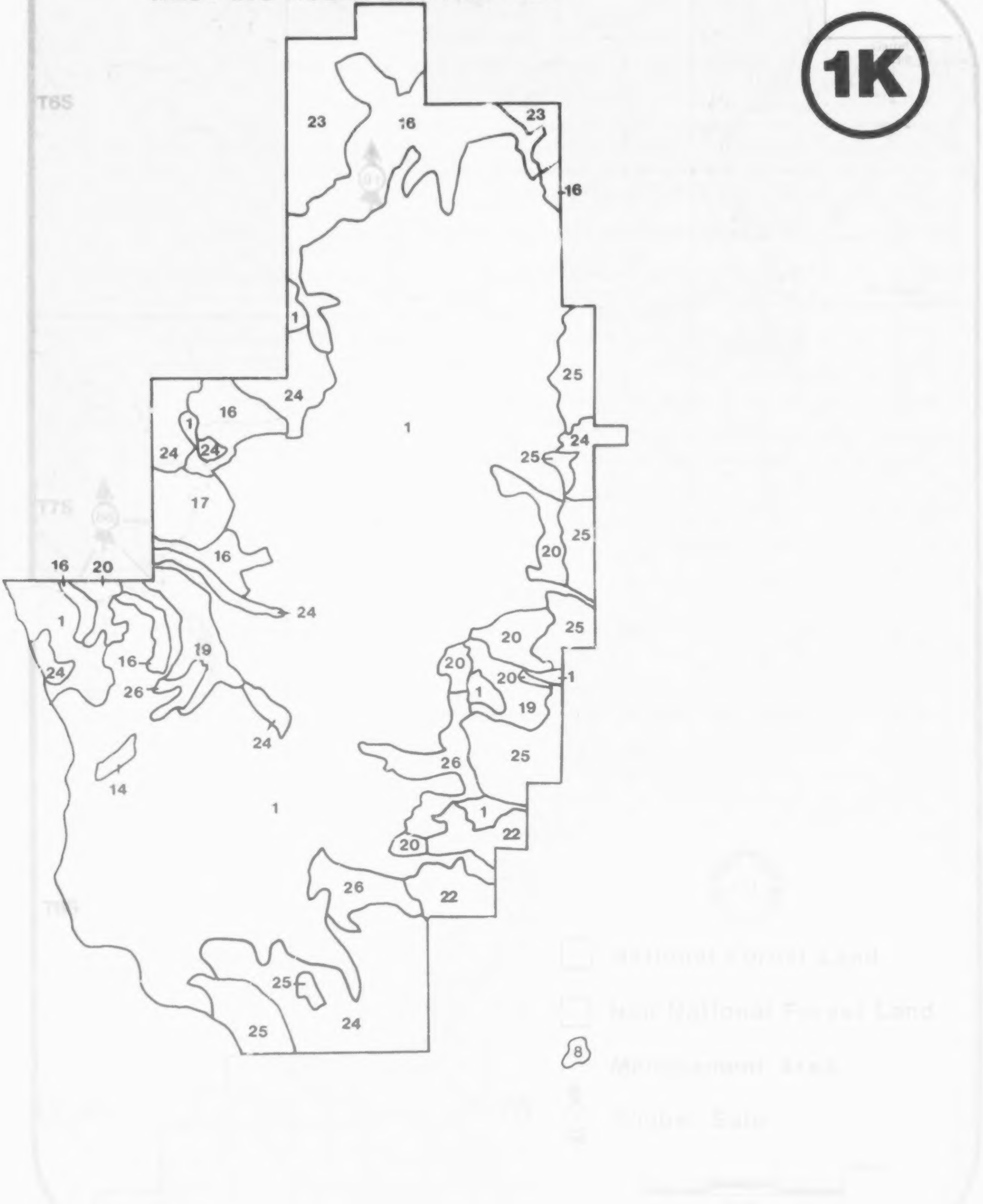
GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5. These aceages have not been calculated for GDA's.

GDA-1J (32,074 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 14,177	MA 11 - 824	MA 12 - 16	MA 13 - 74	MA 14 - 209
MA 16 - 8991	MA 18 - 444	MA 19 - 1103	MA 20 - 931	MA 22 - 1818
MA 23 - 415	MA 24 - 1229	MA 25 - 740	MA 26- 1103	

GEOGRAPHIC DISPLAY AREA

WEST BIG HOLE PLANNING UNIT


1K
T6S
T7S
T8S
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24
25
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25
25
20
25
20
20
20
1
1
19
24
16
26
19
24
24
1
14
26
25
1
22
20
26
22
25
25
24
National Forest Land
Non National Forest Land
8
Management Area
Timber Sale

BIG HOLE: GDA-1K Major drainages in this GDA include Fox Creek and Harrison Canyon.

Vegetative Characteristics Vegetation on lower slopes is grassland and sagebrush-grassland with scattered patches of Douglas-fir. Lodgepole pine and subalpine fir forest dominates the mid-elevations. The steep slopes on the east face of the area have open stands of Douglas-fir. Whitebark pine occurs at higher elevations.

Water The capacity of the GDA to receive, store and produce water is fairly high. Water turbidity is low.

Wildlife and Fish The area contains excellent elk summer-fall habitat. Other big game species include moose, mule deer, black bear, and mountain lion. Important elk calving and rutting areas also occur in the area. The GDA includes Peterson Lakes, which have fishable populations of trout, and Harrison Lake which receives little use.

Recreation This GDA contains no developed campgrounds or picnic sites. The area is heavily hunted in the fall.

Range Primary range is open grassland at lower elevations. Cattle graze the area from mid-June through mid-October.

Timber Commercial timber sales have occurred at the north end of the GDA.

Transportation System Several roads provide access to the GDA. The Horse Prairie and Big Hole Pass Roads provide public access.

Area Access Guidelines Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory 1-005 contains 42,927 acres.

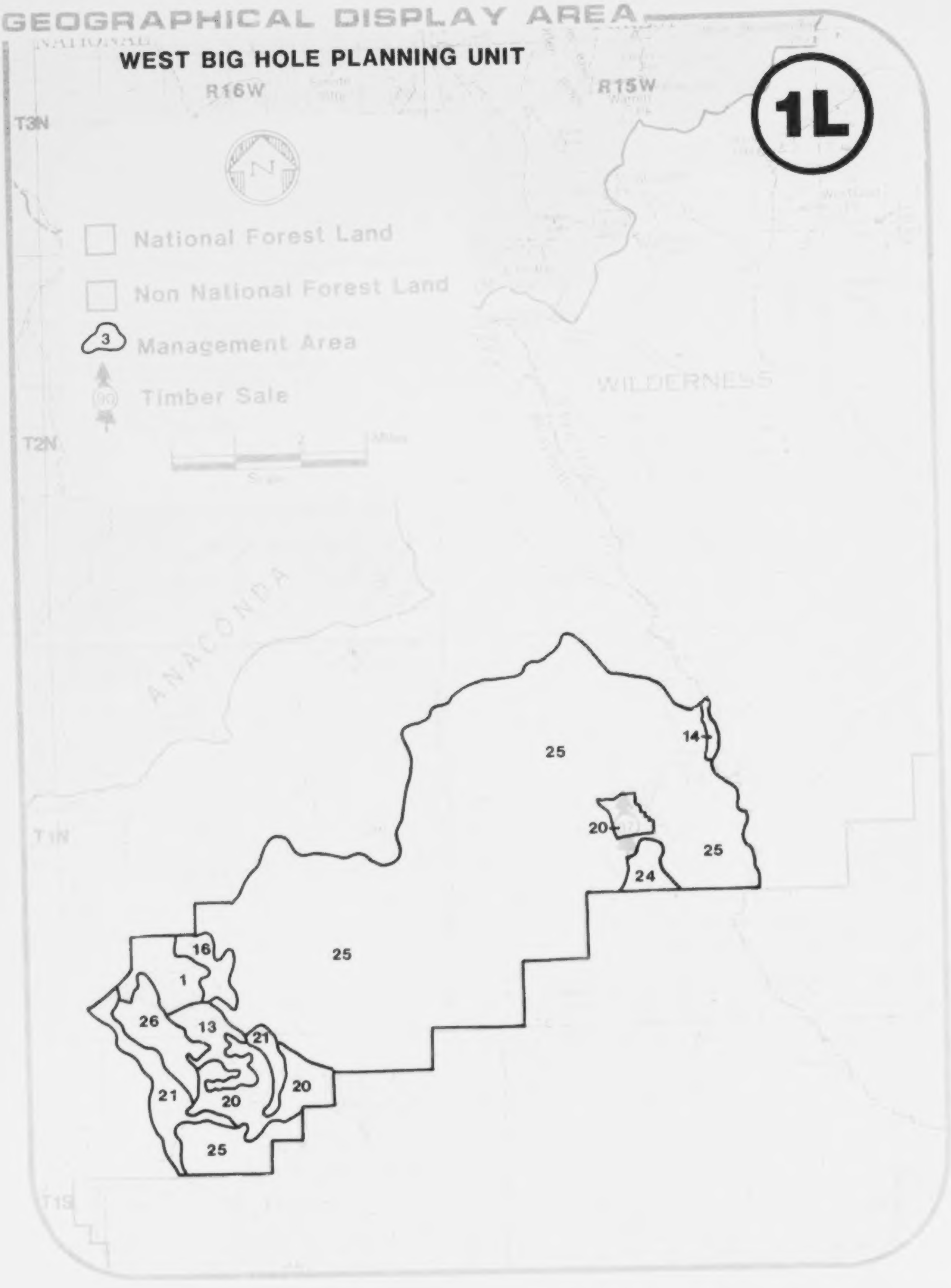
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	25,251	3250	360	24,130	0

GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-1K (52,991 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 33,469	MA 3 - 4	MA 11 - 749	MA 12 - 49	MA 14 - 98
MA 16 - 4145	MA 17 - 720	MA 19 - 784	MA 20 - 1229	MA 22 - 923
MA 23 - 2297	MA 24 - 4113	MA 25 - 3022	MA 26 - 1389	


GEOGRAPHICAL DISPLAY AREA
WEST BIG HOLE PLANNING UNIT
1L
R16W
R15W
T3N
T2N
T1N
T1S
N
National Forest Land
Non National Forest Land
3
Management Area
90
Timber Sale
Miles
Scale
ANACONDA
WILDERNESS
25
14
20
24
16
1
26
13
21
20
21
20
25

BIG HOLE:
GDA-1L This GDA contains land in the Mussigbrod, Plimpton, Thompson, Howell and Pintler Creek drainages.

Vegetative Characteristics Vegetative cover is predominantly forest, with grassland along the Forest boundary on lower elevation south slopes. Lodgepole pine is the dominant tree, with Douglas-fir on south slopes and Engelmann spruce and subalpine fir along stream bottoms. Willow bottoms and wet meadows typify the lower reaches of the glacial valleys. Whitebark pine and subalpine fir grow at higher elevations in the head of Mussigbrod Creek.

Water Water quality is high. The area contains many miles of irrigation ditches, and a dam at the outlet of Mussigbrod Lake.

Wildlife and Fish Summer-fall forage and cover is provided throughout the GDA for deer, elk and moose. Wildlife habitats include moose winter range, elk calving and rutting areas, limited elk winter range, elk wallows, cliffs, and riparian zones, and a unique area of glacial deposits and water-filled potholes. Most elk and deer migrate to the Bitterroot Valley and Fleecer Range in early winter.

Recreation Two developed recreational sites are included: Mussigbrod Lake and Pintler Creek. Dispersed recreational opportunities are numerous. Vehicle use occurs at lower elevations. Trailheads at Mussigbrod and Pintler Campgrounds provide access to the Anaconda-Pintler Wilderness. In addition, access is provided by the Northside Road in the Howell-Thompson Creek area. The GDA contains a potential Continental Divide National Recreation Trail corridor.

Range Rangeland consists of open sage and grassland at lower elevations, complemented by scattered moist bottomlands and grass stringers. The three range allotments are grazed between early July and mid-October.

Timber Approximately 220 acres have been cut over near the Forest bounday in Section 8, west of Mussigbrod Creek. Several old, narrow pole roads provide access from adjacent private land.

Transportation System The Mussigbrod Lake, Northside and Pintler Creek Roads provide primary access. No legal public right-of-way exists on the Mussigbrod Lake Road. Several foot trails provide access into Mussigbrod, Hell Roaring, Plimpton, Thompson, and Pintler Creeks.

Area Access Guidelines Access by trails or historically developed jeep roads. The Mussigbrod area has access via controlled use roads with one primary access available for motorized public use during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory A1001 contains 15,543 acres. D1001 contains 2,370 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	16,796	588	4017	1451	0

GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-1L (22,852 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 484	MA 11 - 411	MA 12 - 48	MA 13 - 437	MA 14 - 67
MA 16 - 384	MA 20 - 1170	MA 21- 887	MA 24 - 249	MA 25 - 18,030
MA 26 - 685				

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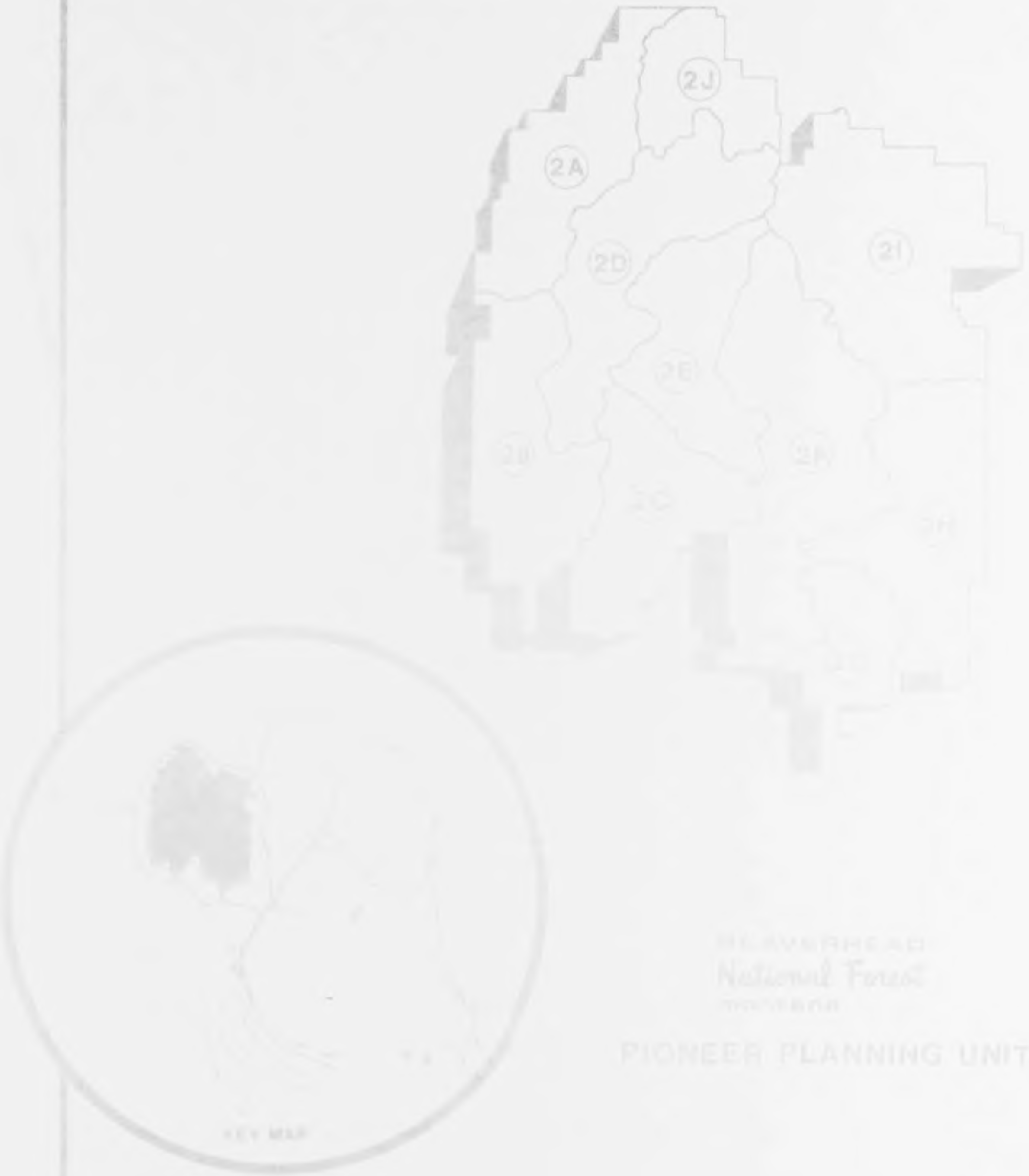
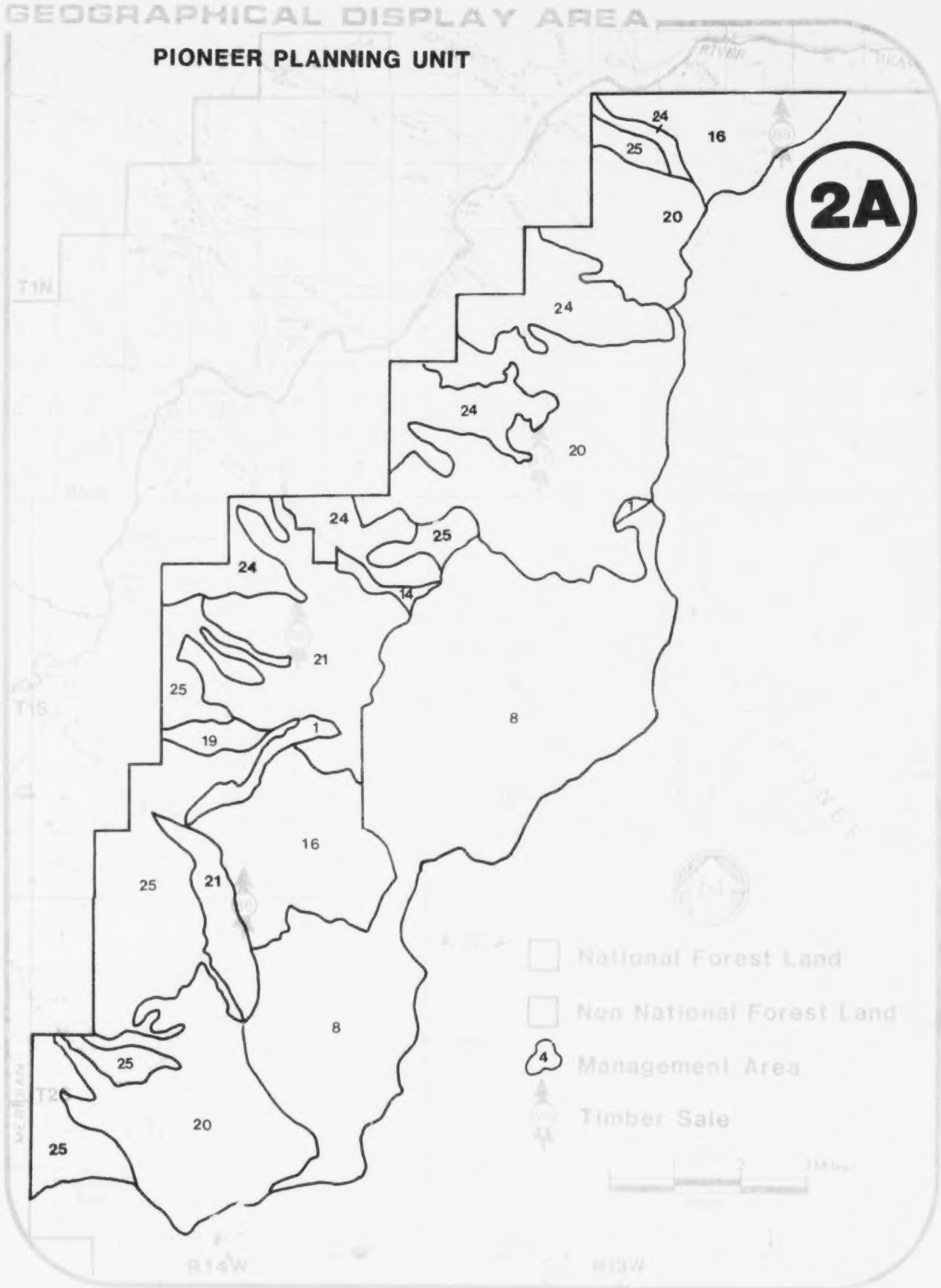
GEOGRAPHICAL DISPLAY AREA

VICINITY MAP


2J
2A
2D
2I
2E
2B
2F
2C
2H
KEY MAP

BEAVERHEAD
National Forest
MONTANA

PIONEER PLANNING UNIT


GEOGRAPHICAL DISPLAY AREA
PIONEER PLANNING UNIT
2A
RIVER
T1N
T1S
T2S
MERIDIAN
R14W
R13W
24
16
25
20
24
24
20
1
24
25
24
14
21
25
8
19
1
16
25
21
8
25
20
25
National Forest Land
Non National Forest Land
4
Management Area
Timber Sale
2
3 Miles

PIONEER: GDA-2A	This GDA consists of the foothills of the West Pioneer Mountains within the Doolittle, Squaw, Toomey, Sawlog, and Walker Creek drainages.
Vegetative Characteristics	Vegetation is predominantly forest, with large grassland parks and benches at lower elevations. Lower reaches of major streams contain broad willow bottoms. Lodgepole pine is the dominant timber species, with Douglas-fir on drier low-elevation sites, and Engelmann spruce and subalpine fir on wetter sites. Whitebark pine and subalpine fir grow on the ridge along the east edge of the GDA.
Wildlife and Fish	The area contains excellents summer-fall forage and cover for deer, elk, and moose. Wildlife habitats include moose winter range, elk calving and rutting areas, limited elk winter range, elk wallows, cliffs, and riparian zones. Mountain goats inhabit the most rugged terrain along the West Pioneer Divide. Big game winter range is provided on the area, at lower elevations, but most key winter range is on private land in the Big Hole Valley. Antelope are seen infrequently in the unit, but small herds on adjacent private lands appear to be increasing. Most streams are spawning grounds for the Big Hole River. Other than Papoose Lake, there are few fishable lakes, but numerous large beaver dams provide good fishing.
Recreation	No developed recreational facilities occur in the area, dispersed recreation use is moderate. Big game hunting is the principal activity.
Range	Incidental grassland is open sage and grass at lower elevations, complemented by scattered moist bottomlands and grass stringers. Summer grazing occurs between late June and mid-October. Prescribed fire and chemical treatment have been used to reduce sagebrush cover in the Tucker, Walker, McVey, Doolittle, Gorris, Salefsky Creek drainages.
Timber	Most of the timberlands are comprised of overmature lodgepole pine and Douglas-fir. Intensive timber management has been limited to the Doolittle Creek plus some scattered post and pole cutting.
Transportation System	The Doolittle Creek Road provides access to the Doolittle Creek area, and several secondary roads branch from it. Low standard roads provide access in the Doolittle, Goris Gulch, Salefsky, Squaw, Lower Toomey, Sawlog Creek,and the upper end of Walker Crrek drainages. Only the Doolittle creek Road has legal public access.
Minerals and Energy	A significant amount of exploration and mining activity has occurred in this area.
Area Access Guidelines	The Doolittle drainage has access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. Walker and Toomey Creek areas have access via controlled use roads that are closed to motorized access during sensitive times of the year. The MA 8 and the Sawlog areas have access by trails or historically developed jeep roads.
Roadless Area Inventory	1-006 contains 15,071 acres. 1006A contains 11,604 acres. 1006B contains 22,862 acres.

Recreation Opportunity Spectrum (Future Condition)

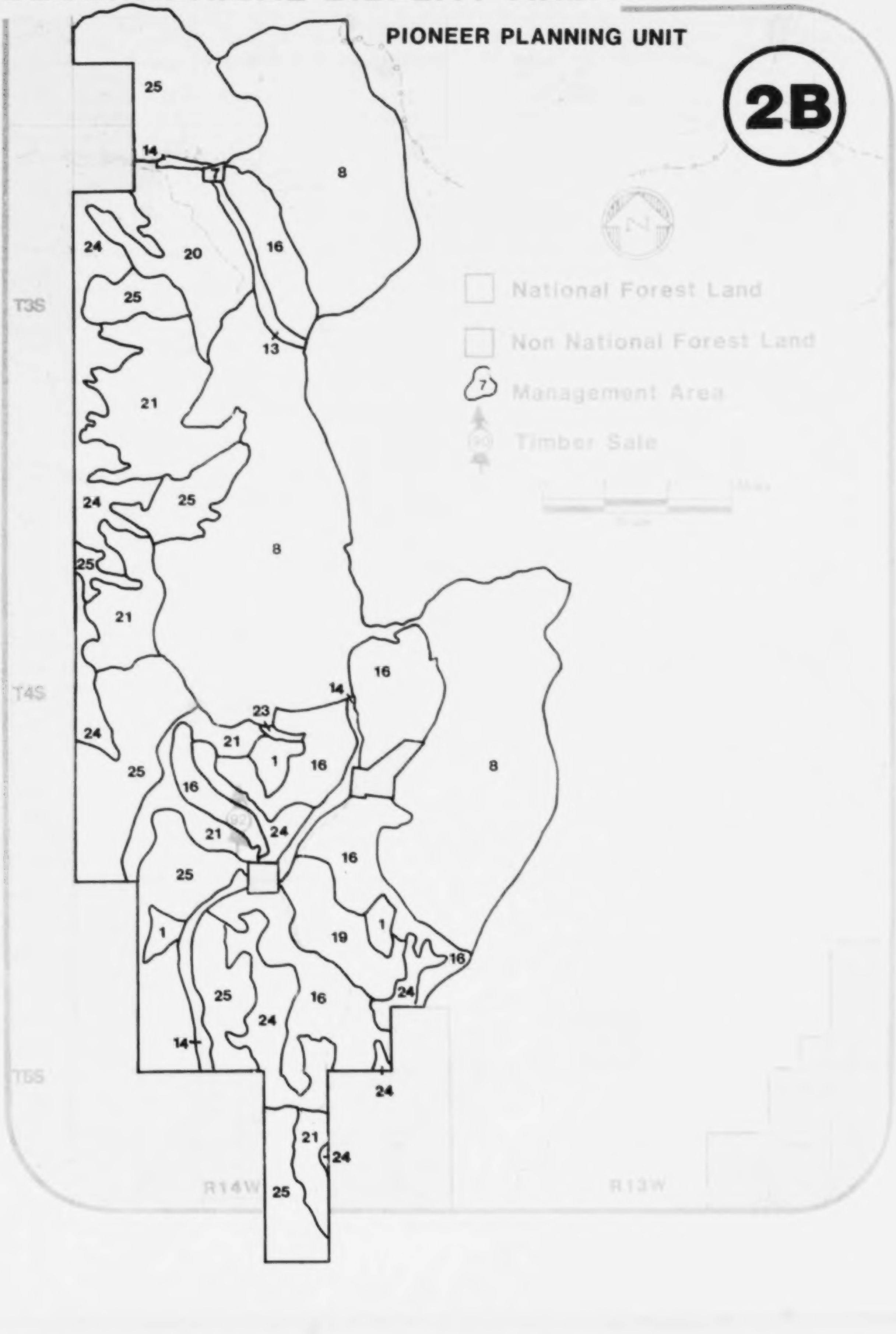
	P	SPNM	SPM	RN	RM	R
Acres -	0	5140	7950	380	38,517	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-2A (51,987 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 463	MA 8 - 15,079	MA 11 - 616	MA 12 - 150	MA 14 - 219
MA 16 - 4871	MA 19 - 370	MA 20 - 13,014	MA 21 - 5085	MA 24 - 5092
MA 25 - 7022	MA 29 - 6			

GEOGRAPHICAL DISPLAY AREA



PIONEER PLANNING UNIT

2B
National Forest Land
Non National Forest Land
7
Management Area
90
Timber Sale
Miles
Scale
T3S
T4S
T5S
R14W
R13W
25
14
7
8
24
20
16
25
13
21
24
25
8
25
21
16
14
23
21
1
16
8
24
25
16
21
24
16
25
1
1
19
16
24
25
16
24
14
24
21
24
25
92

PIONEER: GDA-2B This GDA includes that portion of the West Pioneers lying west of the Wise River-Big Hole Divide and between Butch Hill and Proposal Rock.

Vegetative Characteristics Vegetative cover on the GDA is about two-thirds forest and one-third grassland, with the grassland on southwest slopes at lower elevations. Douglas-fir grows on many slopes in the southwest corner. Lodgepole pine is the dominant species, but Engelmann spruce is common on moist, low elevation slopes. Lodgepole pine gradually gives way to whitebark pine and subalpine fir on the higher elevation ridges.

Water Water turbidity is low. Water quality is high.

Wildlife and Fish Mule deer, elk, moose, mountain goat, a limited number of antelope and upland game birds are found in the GDA, as are furbearers and other small mammals and birds common to Western Montana. Forest lands provide important elk winter cover and spring-summer-fall habitat. Important elk calving areas also exists. Larger streams contain mainly brook trout, although some cutthroat trout are also present. Two lakes containing fish are located in the GDA.

Recreation Hunting is the main recreational use, but the area also serves backpackers heading for lakes in adjacent units. The small campground in Steel Creek is a popular picnic area in the summer and is used for camping by hunters in the fall.

Range All allotments have dual cattle and elk use. Range developments include many miles of range fences, several water developments and one rider's cabin. Range is open sage and grassland at lower elevations, complemented by scattered moist bottomlands and grass stringers. Burning and chemical treatments have been applied to control sagebrush and willow in Steel, Sheep, and Warm Springs creeks.

Timber Minor volumes of timber have been harvested by selective cut in the Steel Creek drainage. Scattered post and pole cutting has occurred adjacent to private land.

Transportation System The only public access is provided by the Steel Creek Road, located in the middle of the area. Four-wheel-drive roads on South Steel Creek and Warm Springs Creek, and several old pole roads scattered along the western boundary, provide additional access. Most of these roads originate on private land adjacent to the Forest.

Minerals and Energy A significant amount of exploration and mining activity has occurred in this area.

Area Access Guidelines Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The MA 8 area has access by trails or historically developed jeep roads.

Roadless Area Inventory 1-006 contains 26,127 acres. 1006B contains 2,202 acres. 1006C contains 11,982 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	12,850	11,950	600	31,678	0

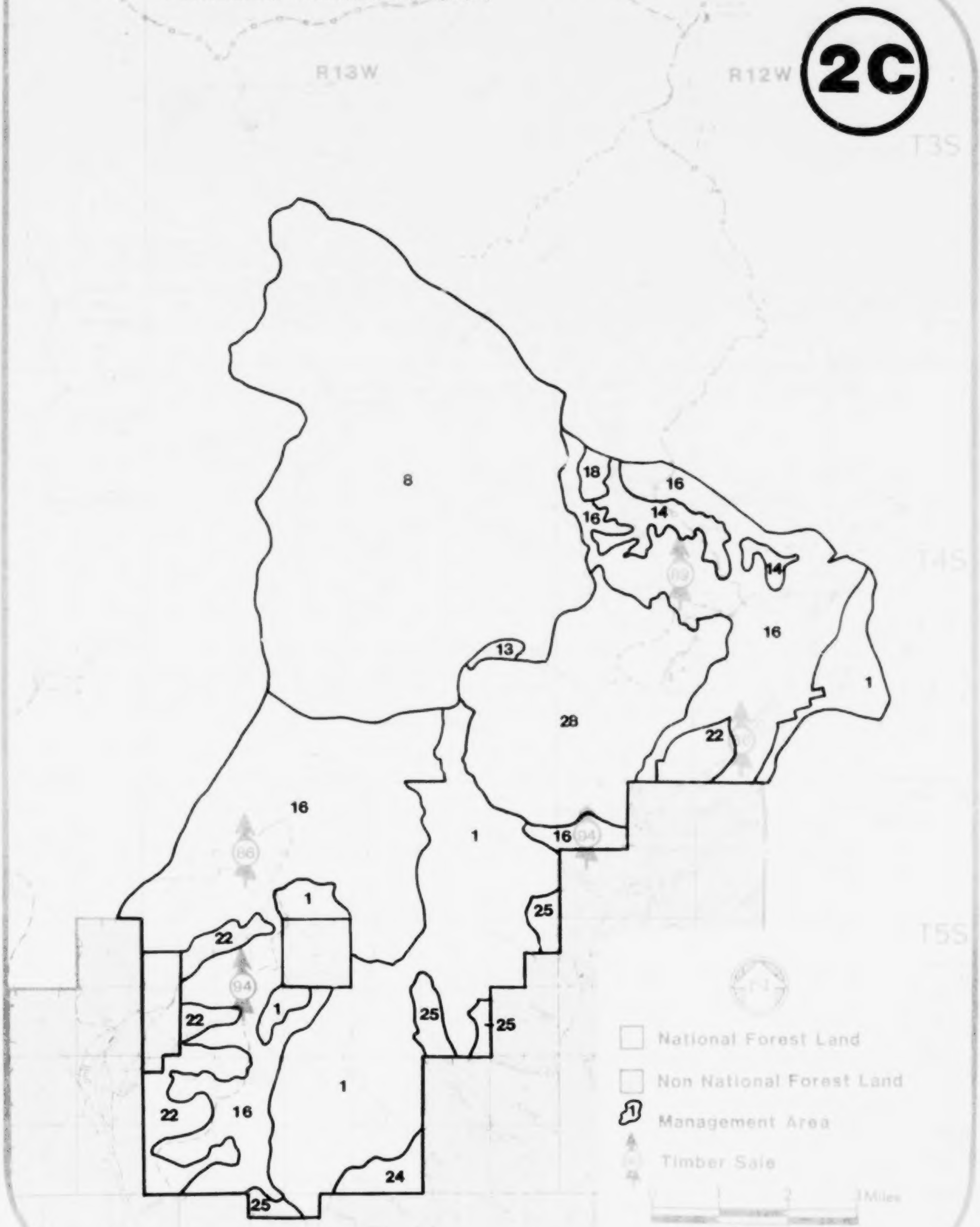
GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA-2B (57,078 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA Acres
MA 1 - 824	MA 7 - 40	MA 8 - 21,834	MA 11 - 790	MA 12 - 100
MA 13 - 336	MA 14 - 690	MA 16 - 7861	MA 19 - 1235	MA 20 - 2239
MA 21 - 5114	MA 23 - 60	MA 24 - 4902	MA 25 - 11,053	

GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT


2C
R13W
R12W
T3S
T4S
T5S
8
18
16
14
16
14
16
13
28
1
22
16
16
94
86
1
25
22
94
1
22
25
25
1
22
16
24
25
89
National Forest Land
Non National Forest Land
Management Area
Timber Sale
0
1
2
3 Miles
Scale
N

PIONEER: GDA-2C	Major drainges in the GDA include Wyman Creek, Pole Creek, Blue Creek, Dingley Creek, and the east side of Bull Creek.
Vegetative Characteristics	Vegetative cover in the southern half of the area is predominantly forest with sagebrush grasslands on lower elevation slopes. Lodgepole pine is the dominant tree species, but Engelmann spruce is common on moist, lower elevation slopes. Whitebark pine and subalpine fir dominate the higher elevation ridges. In the northern one-half, vegetation is a mosaic of forested uplands and stringers of wet meadows and willow bottoms. Lodgepole pine and Douglas-fir are the dominant trees on the forested uplands.
Water	The capacity to receive, store, and produce water is fairly high. Natural turbidity is low.
Wildlife and Fish	Wildlife species are abundant in this area. Big game species include elk, moose, mule deer, antelope, black bear, and mountain lion. Pine marten and beaver are important fur bearers. Rainbow, brook, and cutthroat trout occur in most streams. Riverine stock of grayling occur in Wyman Creek.
Recreation	Recreational values are high. A ski area and a hot springs resort are major commercial recreation developments. Crystal Park has a developed picnic site and provides a public digging area for quartz crystals. The Wise River/Polaris road is a National Recreation Snowmobile Trail.
Range	The primary range is open grasslands at lower elevations and narrow wet meadows at higher elevations. Cattle graze the area from late June through September.
Timber	Timber harvesting on National Forest land has occurred in Hot Springs and Bull Creek drainages.
Minerals and Energy	A significant amount of exploration and mining activity has occurred in this area.
Area Access Guidelines	The Bull Creek area has access via controlled use roads with one primary access available for the motorized public use even during the sensitve period when all or most axillary roads are closed to motorized use. The MA 8 area had access by trails or historically developed jeep roads.
Roadless Area Inventory	1-006 contains 22,091 acres. 1006D contains 10,702 acres. 1006E contains 1,634 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	22,539	2664	41	24,188	1158

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

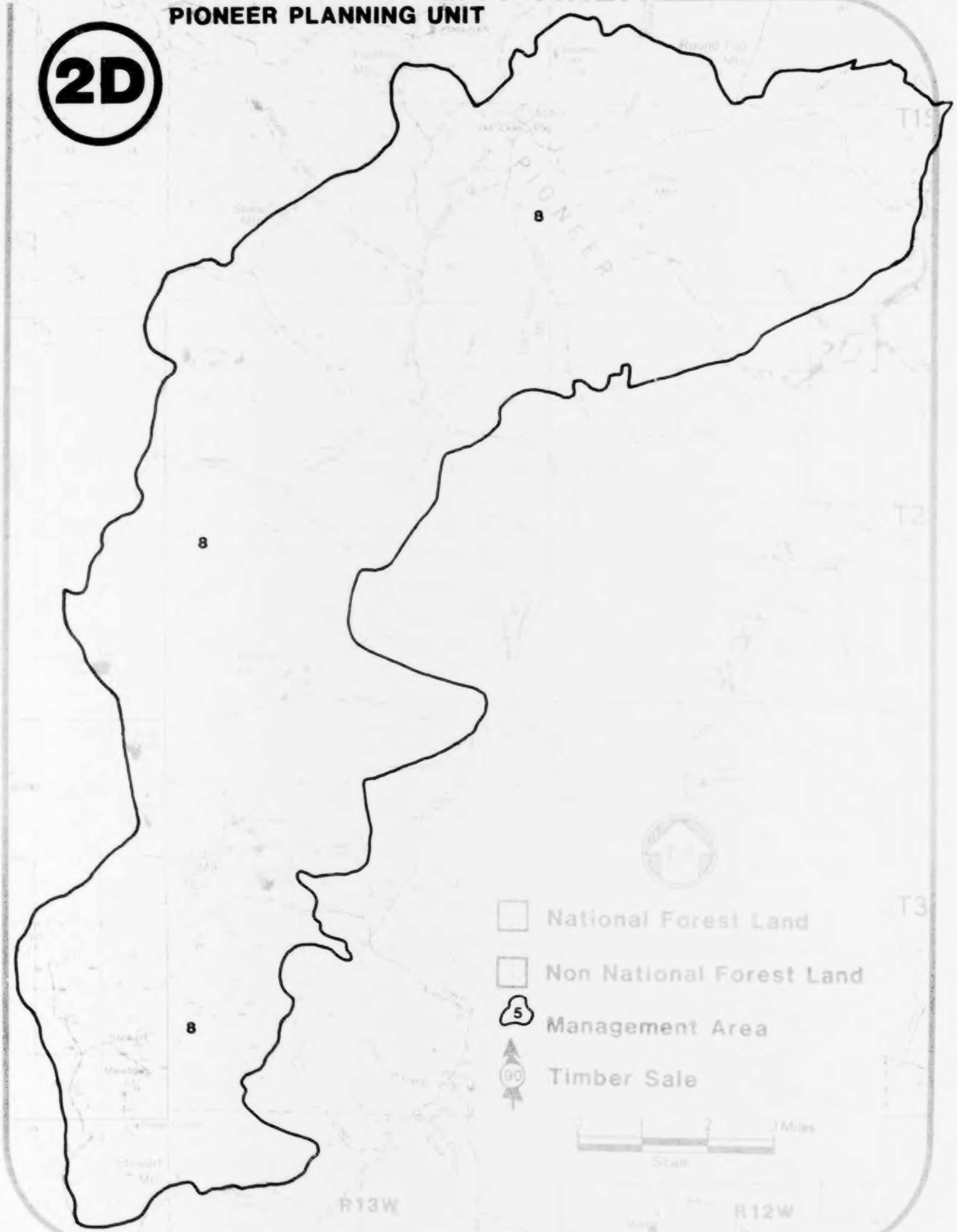
GDA-2C (50,590 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 8268	MA 3 - 9	MA 8 - 17,550	MA 11 - 660	MA 12 - 111
MA 13 - 165	MA 14 - 790	MA 16 - 14,722	MA 18 - 185	MA 22 - 1736
MA 24 - 361	MA 25 - 652	MA 28 - 5374	MA 29 - 7	

GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT

2D


Round Top Mtn
PIONEER
8
8
8
Stewart Meadows
Stewart Mtn
R13W
R12W
T1
T2
T3
National Forest Land
Non National Forest Land
5
Management Area
90
Timber Sale
2
Miles
Scale

PIONEER: GDA-2D The GDA consists of upper to middle elevation lands east of the crest of the West Pioneer Mountains from Stine Creek to Stewart Meadows.

Vegetative Characteristics Vegetative cover is mostly forest, but scattered throughout are numerous small parks, meadows, and willow bottoms. At mid-elevations lodgepole pine is the major species. Douglas-fir grows on south-facing slopes along Pattengail Creek; Engelmann spruce grows in small pockets along creek bottoms, and also in larger stands in high-elevation basins. Whitebark pine and subalpine fir grow at higher elevations. The southernmost known stand of alpine larch is located on Stine Mountain. Fairly large parks occur in the Lost Horse drainage, but most grassland is scattered small parks and meadows. High-elevation basins at the west and north ends of this area contain stands of whitebark pine and subalpine fir in a mosaic of meadows and subalpine grasslands. Large willow bottoms and wet meadows are along major drainages.

Wildlife and Fish Big game include elk, moose, mule deer, black bear, mountain lion, and mountain goat. The area provides excellent summer-fall habitat for deer and elk. No elk or deer winter range exists. Moose winter in many creek bottoms. Most lakes contain fishable populations of either brook or rainbow trout with grayling occurring in Odell and Schwinegar Lakes. Grayling occur in Bobcat lakes.

Recreation Motorbike use is now prohibited on the Odell Creek trail. The Pioneer Loop trail, which runs down the western edge of the GDA is a National Recreation Trail. The cabin at Bear Lake has been restored and is popular with snowmobilers. Trapping is a popular winter recreational activity.

Timber Very little of this area is suitable for timber management.

Range The majority of the GDA is outside of livestock grazing allotments. The Stewart Meadows and Lost Horse Creek areas are where livestock grazing is permitted. Cattle use these areas from late June to late September.

Transportation System The Stine Creek portion of the GDA is accessed by trail from the Wise River/Polaris road. The Lacy Creek road is a major access point and is drivable by cars. Odell Creek trail is accessed by a low standard road which is drivable by two wheel drive trucks when the road surface is dry.

Minerals and Energy A significant amount of minerals exploration has occurred in this area.

Area Access Guidelines Access by trails and historically developed jeep roads.

Roadless Area Inventory 1-006 contains 58,193 acres. 1006E contains 132 acres.
1006F contains 3,871 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres →	0	42,857	17,064	561	1684	60

GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

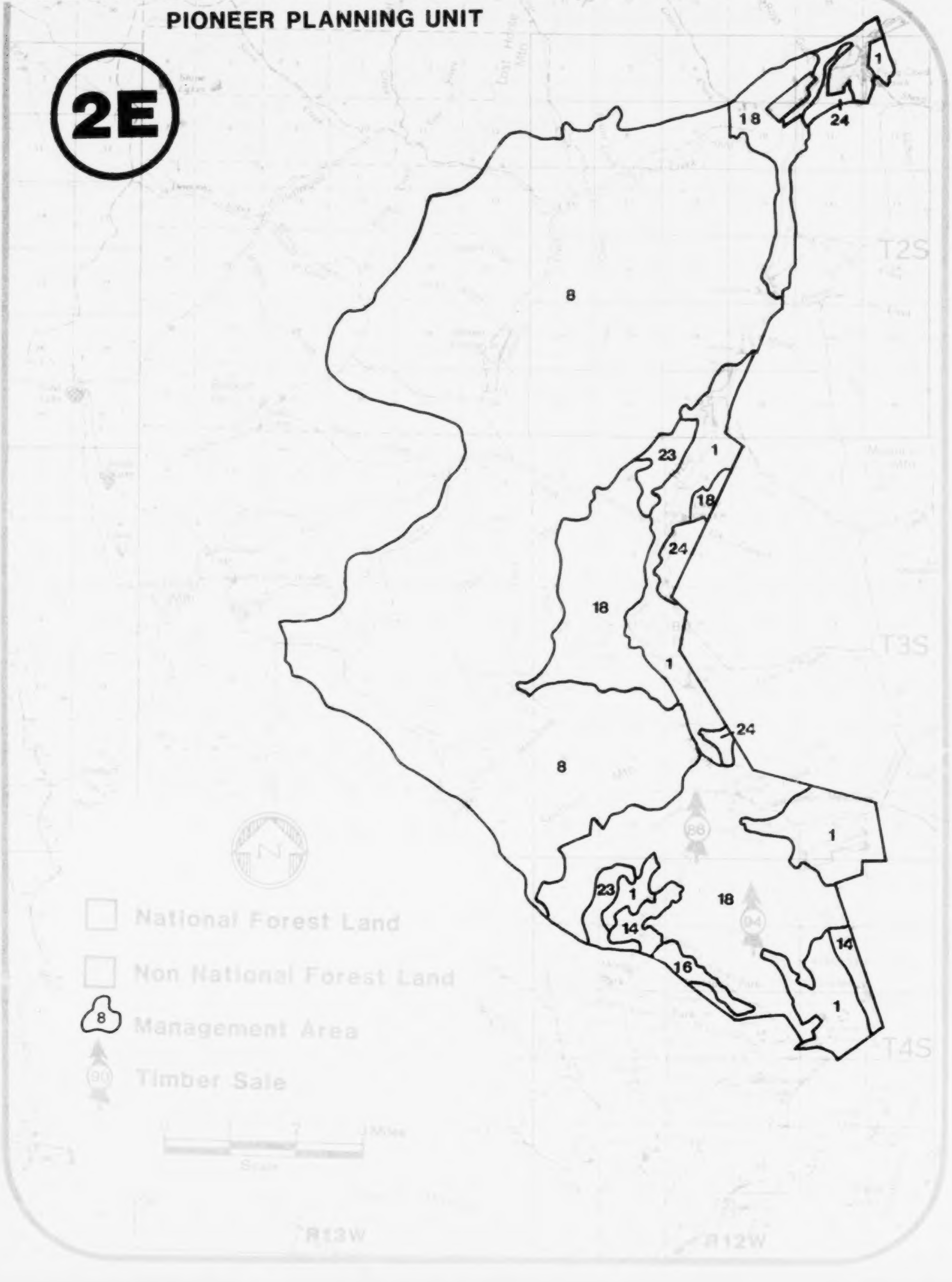
GDA-2D (62,226 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 8 - 61,251	MA 11 - 468	MA 12 - 454	MA 29 - 53

GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT

2E


1
18
24
T2S
8
23
1
18
24
18
T3S
1
24
8
88
1
23
1
14
18
94
14
16
1
T4S
N
National Forest Land
Non National Forest Land
8
Management Area
90
Timber Sale
0
1
2
3 Miles
Scale
R13W
R12W

PIONEER: GDA-2E	This GDA consists of the Wyman Creek, Jacobson Meadows and lower portions of the Lacy Creek and Pattengail Creek area. There are small tracts of private land within the GDA at the Pattengail Creek, Gold Creek, Jerked Prairie, and the Elkhorn Mine. The ghost town of Coolidge and the Elkhorn Mill site have historical significance.
Vegetative Characteristics	On the south end of the GDA, vegetation consists of about one-third forest. Lodgepole pine is the major species. The southwestern area is a mosaic of large bouldery parks, wet streamside meadows, and fairly open stands of lodgepole pine. A large, wet meadow and willow bottom occurs in the Jacobson Creek valley. Farther north vegetative cover is mostly forest, but scattered throughout are numerous small parks, meadows, and willow bottoms. At mid-elevations lodgepole pine is the major species. Douglas-fir grows on south-facing slopes along Pattengail Creek; Engelmann spruce grows in small pockets along creek bottoms, and also in larger stands in high-elevation basins. Whitebark pine and subalpine fir grow at higher elevations. Fairly large parks occur in Jerked Prairie, but most grassland is scattered small parks and meadows. High-elevation basins at the north end of this unit contain stands of whitebark pine and subalpine fir in a mosaic of meadows and subalpine grasslands. Large willow bottoms and wet meadows are along major drainages.
Water	Water from the lower portions of Elkhorn Creek is contaminated by drainage from the Elkhorn Mine.
Wildlife and Fish	Big game include elk, moose, mule deer, black bear, and mountain lion. The area contains excellent summer-fall habitat for big game. No elk or deer winter range exists. Moose winter along many creek bottoms.
Recreation	In addition to the developed campgrounds, there are several special use summer homes in the vicinity of Grouse Creek, Boulder Creek, and Mono Creek. The Wise River/Polaris road is a National Recreation Snowmobile Trail.
Timber	Very little timber harvest has occurred other than post and pole cutting.
Transportation System	The Wise River-Polaris Road accesses the majority of the area. Lower standard roads access Elkhorn Creek, Wyman Creek, Lacy Creek and Pattengail Creek.
Minerals and Energy	A significant amount of exploration and mining activity has occurred and is occurring in this area. The Elkhorn mining district is included in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	F1008 contains 64 acres. 1-006 contains 24,012 acres. 1006E contains 9,999 acres. 1006F contains 377 acres. 1008A contains 3,649 acres.

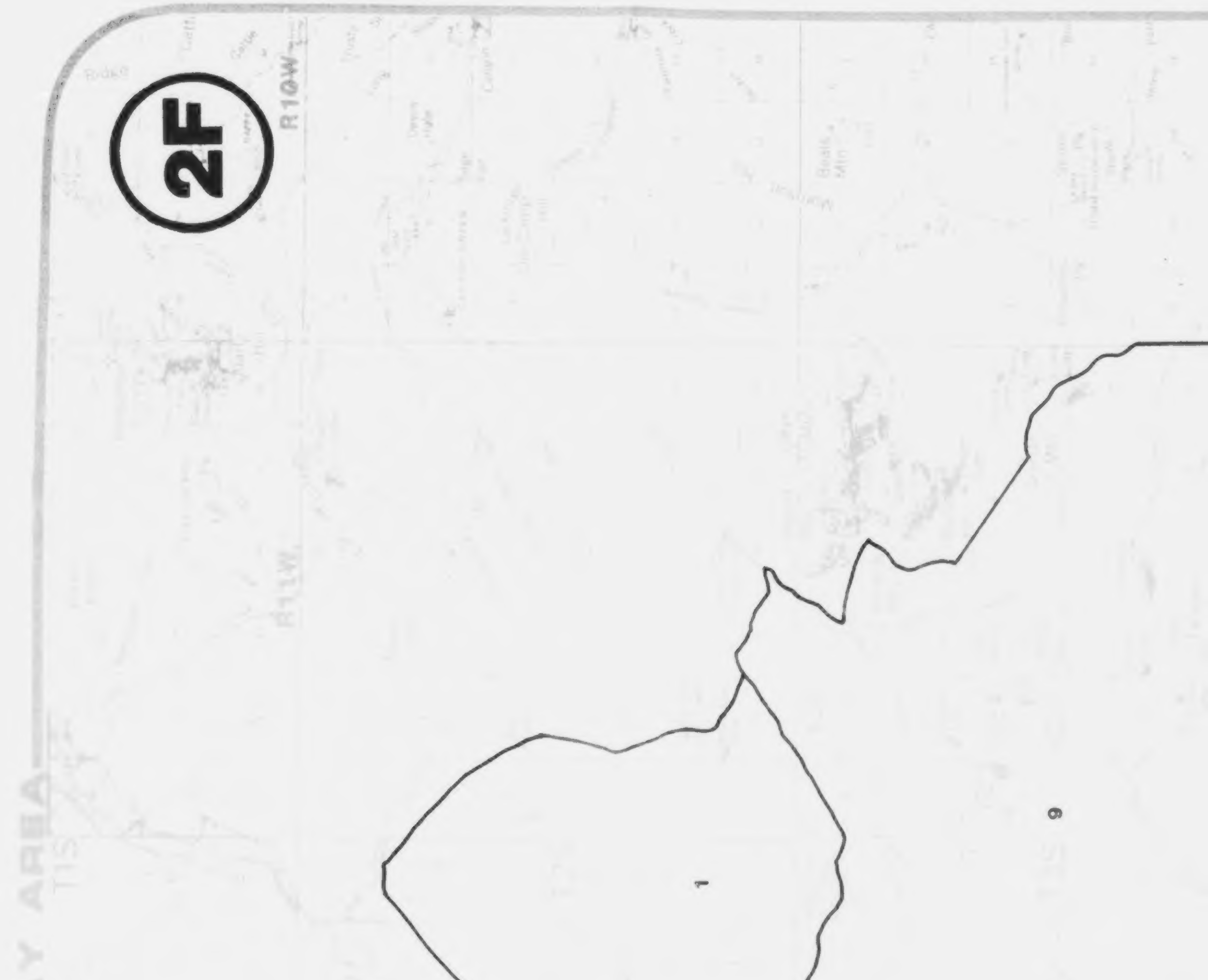
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	22,588	4306	3664	13,685	821

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 2E (45,064 Acres)

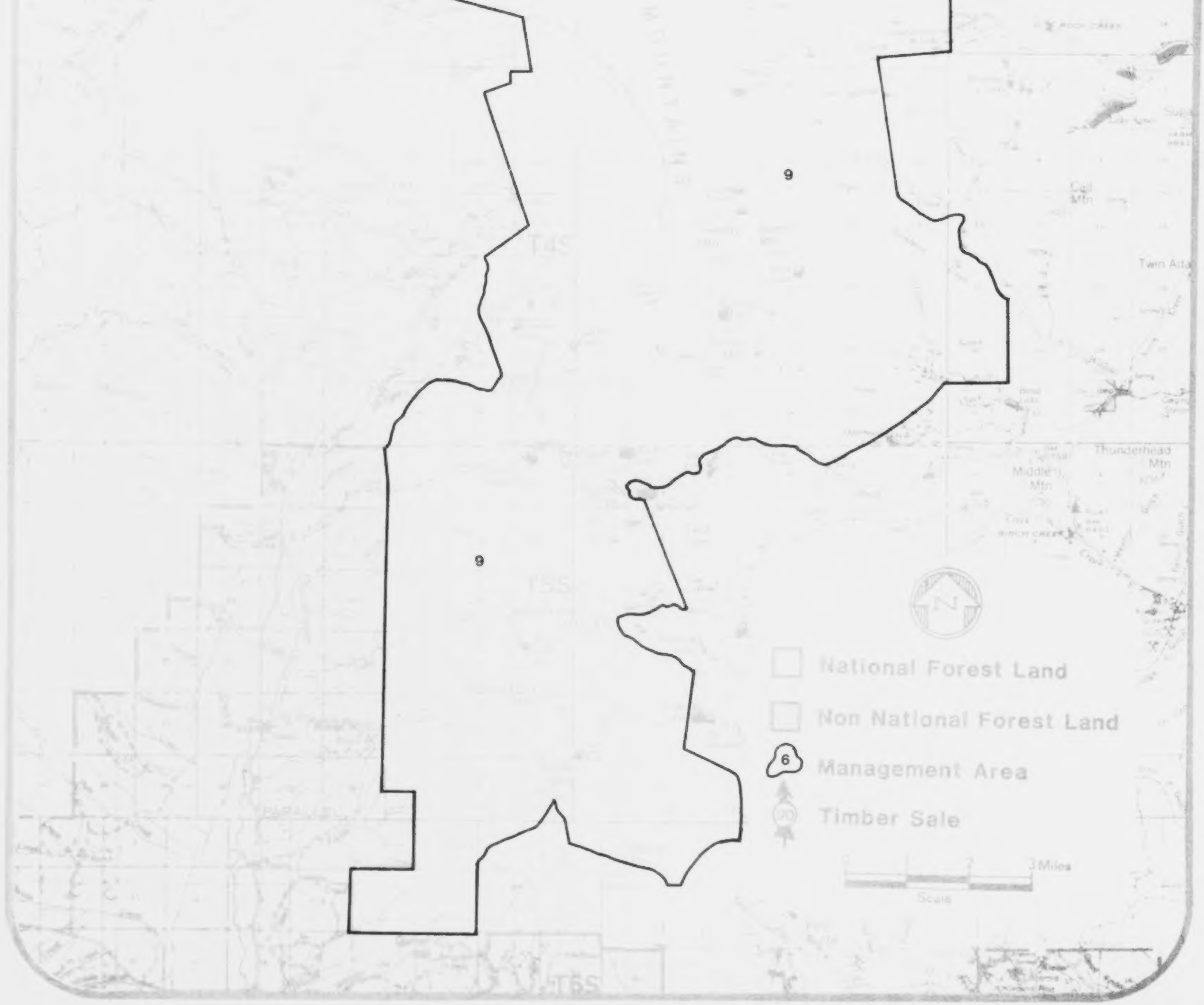
MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 3968	MA 3 - 1	MA 8 - 28,806	MA 11 - 962	MA 12 - 194
MA 14 - 598	MA 16 - 343	MA 18 - 8959	MA 23 - 712	MA 24 - 521



GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT

2F
R10W
R11W
R12W
R13W
T1S
1
9
Beals Mtn


9
9
T4S
T5S
T6S
MOUNTAINS
Cal Mtn
Twin Ada
Thunderhead Mtn
Middle Mtn
BIRCH CREEK
National Forest Land
Non National Forest Land
6
Management Area
30
Timber Sale
0
1
2
3 Miles
Scale

PIONEER: **GDA-2F**	Part of this GDA is comprised of the proposed Torrey Mountain Wilderness.
Vegetative Characteristics	Vegetation on the higher elevation slopes and ridges is dominantly whitebark pine. Alpine vegetation occurs above timberline, about 9,000 feet. On the middle elevation slopes, which make up most of the remainder of the area, vegetative cover is mostly forest, with lodgepole pine, Douglas-fir, subalpine fir and Engelmann spruce the dominant species. Rocky slopes and peaks, talus slopes and rock outcrop areas, small alpine meadows and open stands of whitebark pine and subalpine fir also occur throughout the area.
Water	Most precipitation is snow. The capacity of the area to receive, store and produce water is fairly high. An irrigation dam is located on Waukena Lake under Forest Service permit. The southeast corner of the GDA contains part of the Dillon Municipal Watershed.
Wildlife and Fish	Big game species include elk, moose, mule deer, black bear, mountain lion, and mountain goat. The area contains good elk and deer summer-fall habitat. Some of the elk winter range is located in the southern portion of the GDA. Moose winter in the many creek bottoms. An excellent mountain goat population extends along the crest of the East Pioneer Range.
Recreation	The GDA has high recreational values. It is used extensively for dispersed recreation activities. Higher elevation areas provide outstanding recreational settings among high rocky peaks, steep rocky ridges, open grassy parks and forested basins and lakes. High ridges offer exceptional views.
Range	Some primary range occurs at lower elevations and higher meadows. Cattle graze these areas from Late June through September.
Transportation System	Many low standard trails transect the area. Some four-wheel-drive access occurs along the edge of the area.
Area Access Guidelines	Access by trails or historically developed jeep roads.
Roadless Area Inventory	A1008 contains 61,295 acres. B1008 contains 7,007 acres. C1008 contains 6,130 acres. D1008 contains 3,708 acres. E1008 contains 1,415 acres. F1008 contains 10,024 acres. 1008B contains 35 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	83,442	4615	312	1267	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

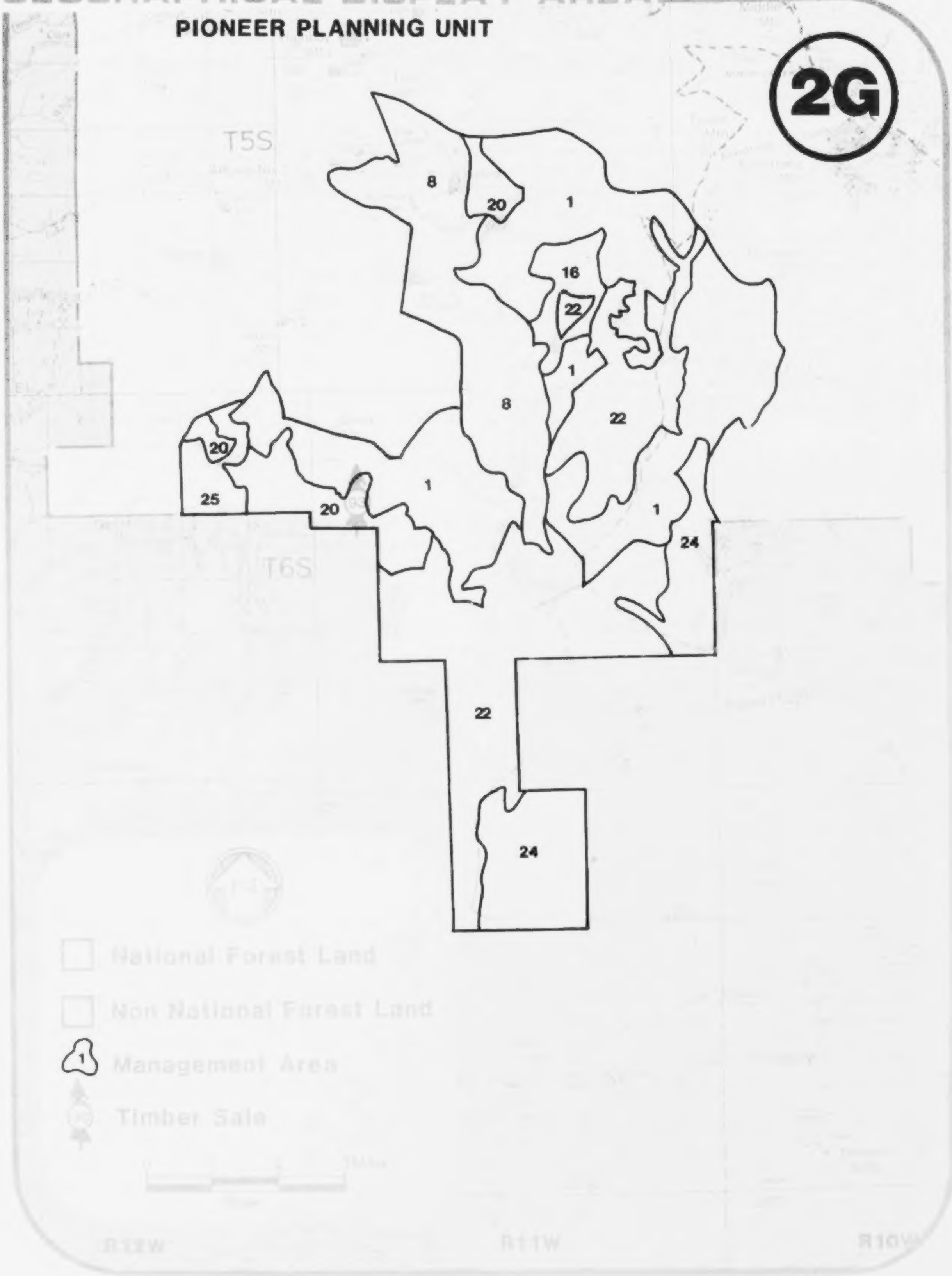
GDA 2F (89,636 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 9853	MA 9 - 79,555	MA 11 - 102	MA 12 - 126

GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT

2G


T5S
8
20
1
16
22
1
8
22
20
25
20
83
1
1
24
T6S
22
24
National Forest Land
Non National Forest Land
1
Management Area
Timber Sale
0
1
3 Miles
R12W
R11W
R10W

**PIONEER:
GDA-2G** This GDA contains the upper east side and lower portion of Rattlesnake Creek.

Vegetative Characteristics Vegetative cover on lower elevation slopes is sagebrush-grassland with intermingled patches of forest. Mid-elevation slopes are forested with lodgepole pine, Douglas-fir, subalpine fir and Engelmann spruce. On upper elevations whitebark pine occurs.

Water The capacity of the area to receive, store and produce water is fairly high. Active irrigation dams include Estler Lake, under Forest Service permit, and Kelly Reservoir, under Department of Interior easement. Boatman, Minneopa and Tent Lakes have breached dams. Part of the water for Dillon is taken from the Rattlesnake drainage approximately 5.5 miles below the Forest boundary. Natural turbidity is low.

Wildlife and Fish Big game species include elk, moose, mule deer, antelope, black bear, mountain lion, and mountain goat. The area contains good summer-fall deer and elk range. Elk and deer winter range exists in the southern portion of the GDA. Moose winter along many creek bottoms. The GDA contains ten lakes; most have trout fisheries.

Recreation Higher elevation areas provide outstanding recreational settings among high rocky peaks, steep rocky ridges, open grassy parks and forested basins. High ridges offer exceptional views. No developed recreation sites are included.

Range Primary range is mostly open grasslands at lower elevations. Cattle graze the area from early June through September.

Timber Most timber harvesting has been small quantities of firewood, posts, poles and Christmas trees.

Transportation System Ample roads serve most of the area with adequate legal public access.

Minerals and Energy A significant amount of exploration and mining activity has occurred and is occurring in this area. The area includes a portion of the Argenta mining districts and also includes other smaller districts. There is some production from the area each year.

Area Access Guidelines Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory 1008D contains 7,755 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	1591	10,161	11,277	6947	0

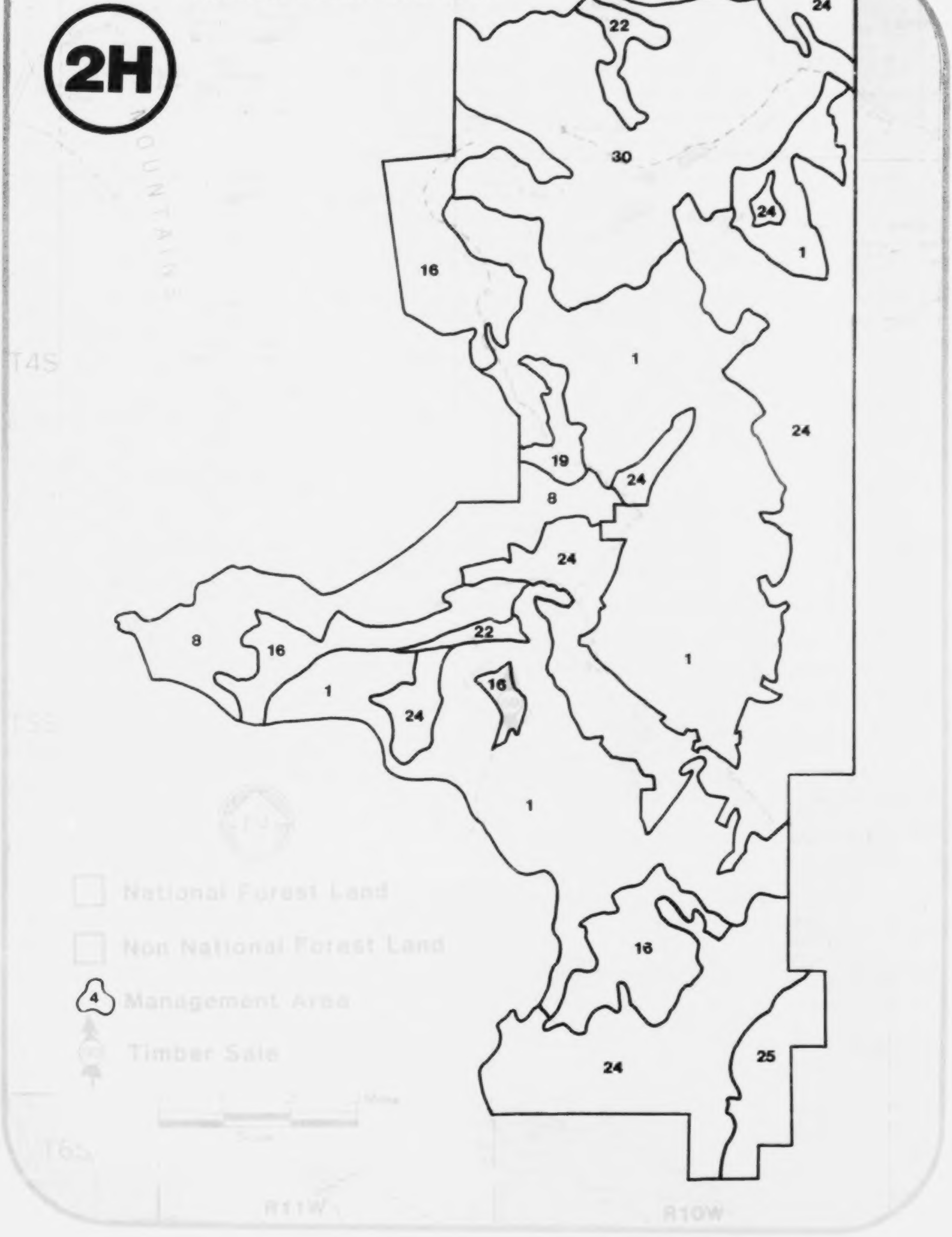
GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 2G (29,976 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 11,037	MA 3 - 8	MA 8 - 4268	MA 11 - 265	MA 12 - 39
MA 16 - 822	MA 20 - 1793	MA 22 - 8097	MA 24 - 3021	MA 25 - 626

GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT


2H
MOUNTAINS
T4S
T5S
T6S
22
24
30
24
1
16
1
24
19
24
8
24
8
16
22
1
16
1
24
1
16
24
25
National Forest Land
Non National Forest Land
4
Management Area
Timber Sale
Miles
Scale
R11W
R10W

PIONEER: GDA-2H The GDA includes Long John Creek and portions of Rock Creek and Birch Creek.

Vegetative Characteristics Vegetation on lower elevation slopes is grassland and sagebrush-grassland, with intermingled patches of forest. Mid-elevations are forested, with lodgepole pine, Douglas-fir, subalpine fir and Engelmann spruce the dominant species. Higher elevtion slopes and ridges are dominantly whitebark pine.

Water The capacity of the GDA to receive, store and produce water is fairly high. Active irrigation dams are located on Agnes, Bond, and Deerhead Lakes under Forest Service permit, and on Boot, Pear and May Lakes under Department of Interior permit. Natural turbidity is low.

Wildlife and Fish Big game species include elk, moose, mule deer, whitetail deer, antelope, black bear, mountain lion, and mountain goat. Extensive areas of deer winter range are located along lower elevation slopes on the east side of the GDA. Elk winter in the southeast portion of the GDA, and moose winter in the lower creek bottoms. The area contains eight lakes, most with trout fisheries. Lake Agnes contains grayling.

Recreation The area has high recreational values. The Birch Creek facilities of Western Montana College provide excellent educational opportunities for environmental education.

Range Primary range is mostly open grasslands at lower elevations. Cattle graze the area from mid to late June through September.

Transportation System Existing main roads provide good access.

Minerals and Energy A significant amount of exploration and mining activity has occurred and is occurring in the area. Several past producing mines are located within and adjacent to this area.

Area Access Guidelines Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory 1-009 contains 10,179 acres. 1008B contains 5,229 acres. 1008D contains 1,718 acres.

Recreation Opportunity Spectrum (Future Condition)

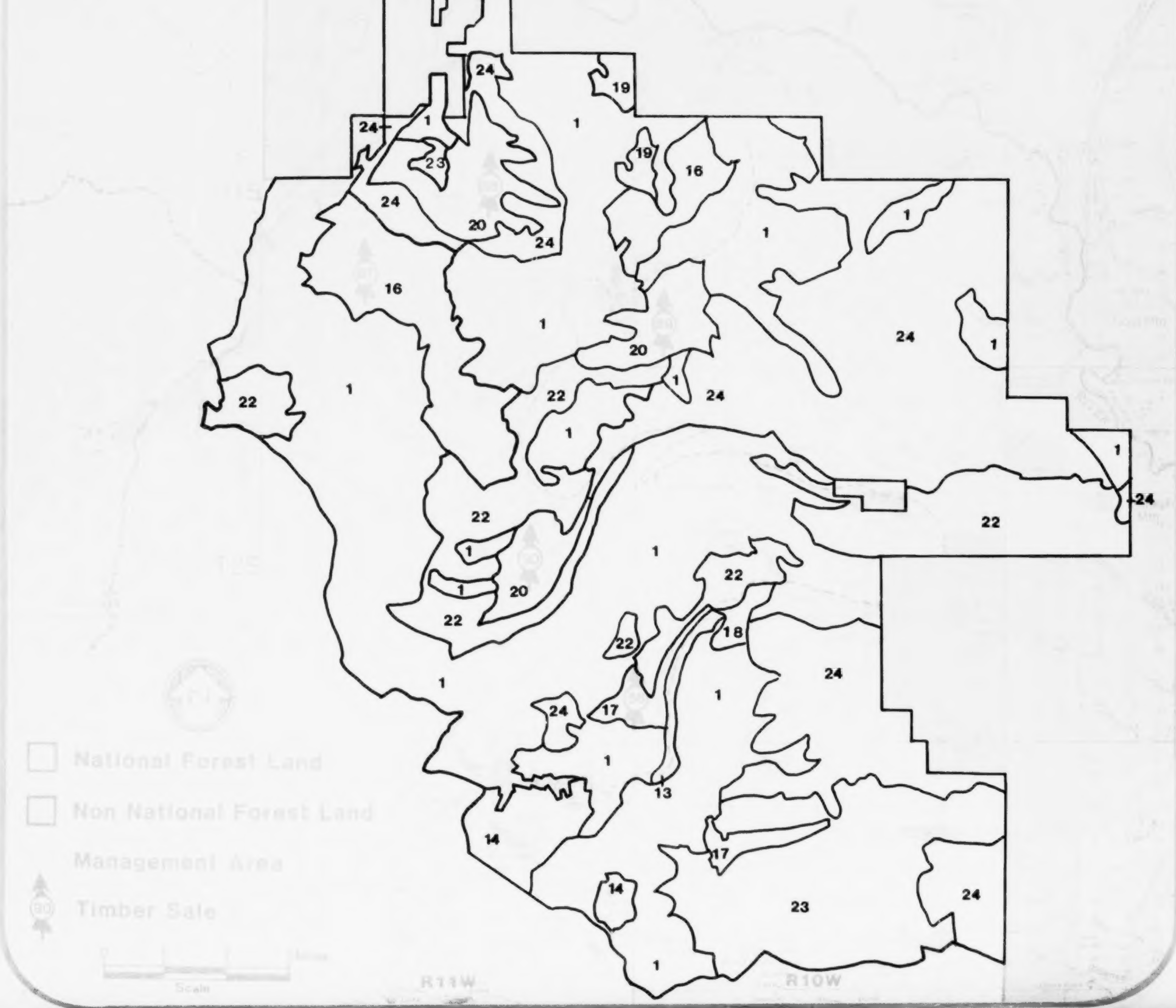
	P	SPNM	SPM	RN	RM	R
Acres -	0	25,985	14,778	14,565	8561	0

GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 2H (63,889 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 21,890	MA 3 - 8	MA 8 - 4297	MA 11 - 838	MA 12 - 35
MA 16 - 6387	MA 19 - 554	MA 22 - 701	MA 24 - 18,196	MA 25 - 1205
MA 30 - 9778				

21
GEOGRAPHICAL DISPLAY AREA
PIONEER PLANNING UNIT
DEER LODGE
NATIONAL
FOREST
DEER LODGE
SILVER BOW


1
14
16
17
18
19
20
22
23
24
13
National Forest Land
Non National Forest Land
Management Area
90
Timber Sale
Scale
Miles
R11W
R10W
T2S

PIONEER: GDA-21	This GDA is composed of Swamp Creek, Adson and Sheep Creek areas in the northwest; Quartz Hill Gulch, Triangle Gulch and Sawmill Gulch in the northeast; and the south end includes Canyon Creek, Trapper Creek, Cherry Creek and Brownes Creek. The administrative site at Wise River and Canyon Creek and the radio repeater at Sheep Mountain are within this GDA.
Vegetative Characteristics	Vegetative cover in the eastern two-thirds of the area is about half sagebrush-grassland, most of which occurs in the Vipond Park area and Lower Canyon Creek. About one-fourth is forested, and the remainder is rocky uplands, noncommercial forest, willow bottoms. In the forested area, lodgepole pine is the dominant species, but small, scattered stands of Engelmann spruce occur along creek bottoms, and Douglas-fir is common at lower elevations. Whitebark pine is common at higher elevations. Limber pine grows on mid-elevation limestone ridges in the northeast part of the GDA.
Wildlife and Fish	Mule deer winter along the lower reaches of Cattle Gulch, Canyon Creek and Trapper Creek. Elk winter in the Devil's Hole area and in the upper reaches of Cattle and Trusty Gulch. Moose summer in upper Trapper Creek and winter in lower Trapper Creek. A few bighorn sheep inhabit the rugged eastern portion of the GDA. Mountain goats are found from Canyon Creek Guard Station to Torrey Mountain. Vipond Park is an important elk migration corridor between summer and winter range. All lakes support populations of fish. Lion Lake sustains populations of rainbow trout.
Recreation	Developed recreation includes one small campground in Canyon Creek and the privately owned Canyon Creek Guest Ranch. The Charcoal Kilns in Canyon Creek, constructed in the late 1800's, are preserved and provide an interesting stop for visitors.
Range	Rangeland is open grassland and sagebrush hillsides at lower elevations. The largest area of primary range occurs on the south-facing slopes of lower Canyon Creek.
Timber	Timber harvest dating from the late 1800's has taken place on much of the area. Recent timber cutting has been limited to removal of small quantities of firewood, posts, poles and Christmas trees.
Transportation System	The Trapper Creek, Canyon Creek, Wise River, Polaris, and Quartz Hill Gulch Roads provide access. Many low standard jeep roads branch from the main access roads. One trail crosses the East Pioneers and drops into the Wise River country via Gold Creek.
Minerals and Energy	A significant amount of exploration and mining activity has occurred, is occurring, and is expected to occurr in this area. The Quartz Hill, Cannivan Gulch, and Hecla mining districts are located within this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The area above the Canyon Creek Guest Ranch has access by trails and historically devloped jeep roads.
Roadless Area Inventory	1-010 contains 18,891 acres. 1008B contains 36,514 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	13,162	34,971	16,849	19,453	3391

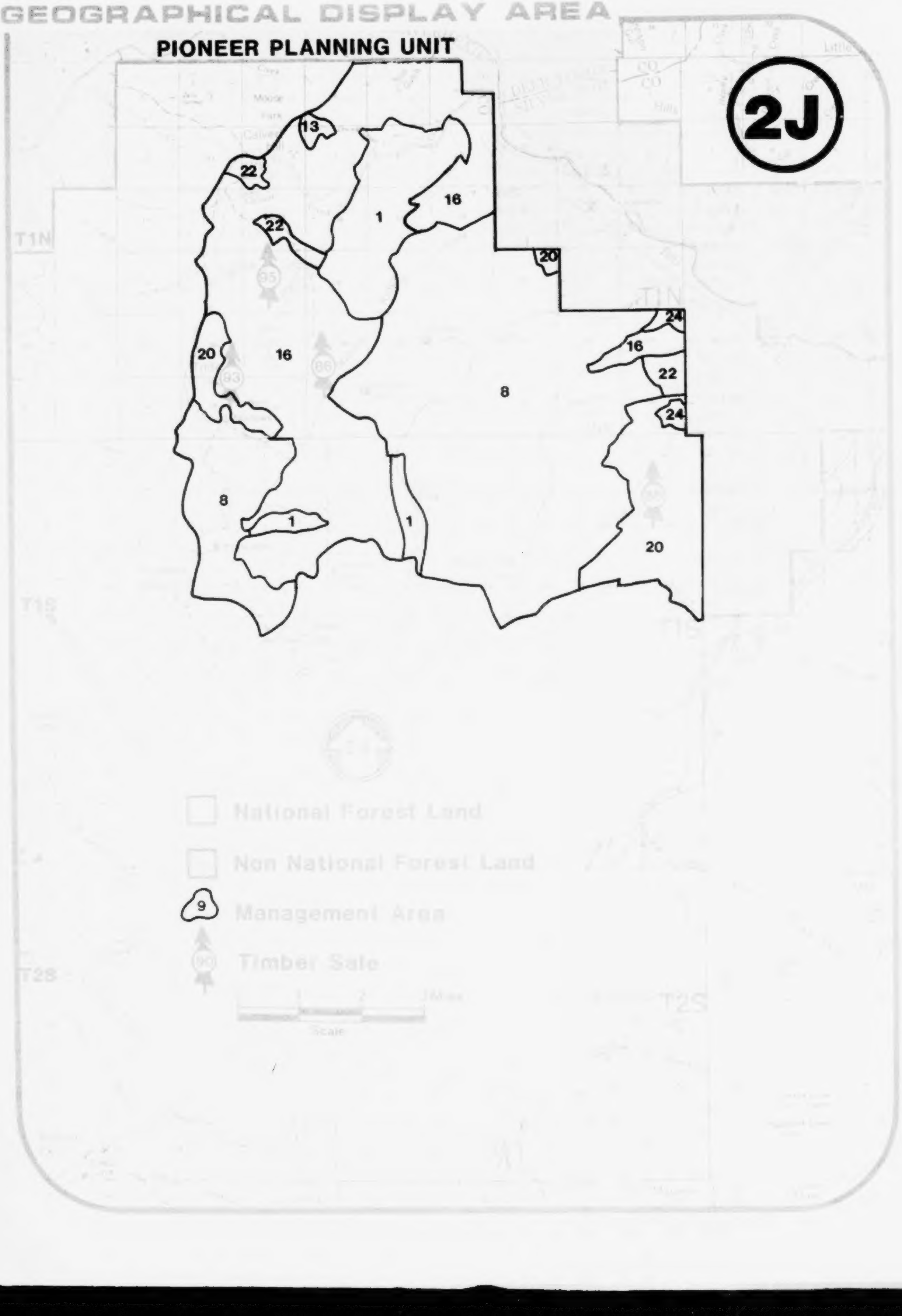
GDA-Management Area Summary

GDA 21 (87,826 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 38,378	MA 3 - 1	MA 11 - 851	MA 12 - 61	MA 13 - 342
MA 14 - 1216	MA 16 - 4639	MA 17 - 924	MA 18 - 288	MA 19 - 559
MA 20 - 4282	MA 22 - 9696	MA 23 - 6802	MA 24 - 19,787	

GEOGRAPHICAL DISPLAY AREA

PIONEER PLANNING UNIT


2J
T1N
T1S
T2S
13
22
22
1
16
20
24
16
22
24
20
16
8
8
1
1
85
86
83
National Forest Land
Non National Forest Land
9
Management Area
90
Timber Sale
1
2
3 Miles
Scale

PIONEER: GDA-2J	This GDA includes the Bryant Creek, Alder Creek and Meadow Creek drainages. The Foolhen Administrative Site is within this GDA.
Vegetative Characteristics	Vegetative cover is predominantly forest. Lodgepole pine is the major species on about two-thirds of the forested lands. Douglas-fir is common at lower elevations, and stands of Engelmann spruce occur at mid-elevations. Whitebark pine grows on high ridges along the south end, and heads of Osborne and Stine Creeks contain alpine larch. Stringers and benches of grassland and sagebrush-grassland are found at lower elevations along the Forest boundary. Open parks and willow bottoms occur mostly in lower Bryant Creek and, to a lesser extent, in the upper reaches of all major drainages.
Water	Two lakes are located in this GDA. Both occur in the Alder Creek drainage. The area is used for irrigation of private lands outside the Forest boundary.
Wildlife and Fish	Some elk and deer winter near the Forest boundary in Harriet Lou and Meadow Creek. Moose are found in all drainage bottoms. Ferguson Lake and Foolhen Lake support populations of rainbow trout and are fished during the summer months.
Recreation	This GDA receives heavy and widespread hunting pressure, mostly for elk. There are no developed recreational areas. The two lakes are fished by backpackers and trails are used by a few motorbike recreationists.
Range	Rangeland is open grassland and sagebursh-grassland at lower elevations, complemented by meadows and grassland stringers at higher elevations. Two cattle allotments are contained in the GDA.
Timber	Intensive timber management has existed since the 1960's.
Transportation System	The Bryant Creek Road provides access to all but two miles of the full length of the western half of the GDA. The Calvert Hill Loop Road provides access to the ridge from Calvert Hill to the headwaters of Sawlog Creek. The Harriet Lou Road provides access to the east side of the area. Three main north-south trails, located in Alder Creek, Meadow Creek and on Foolhen Ridge, provide access to the interior of the GDA.
Minerals and Energy	A significant amount of exploration and mining has occurred and is ocurring in this area. The Calvert Hill Mine, a past producer, is located in this area.
Area Access Guidelines	Bryant, Harriet Lou, Meadow Creek, and upper Alder portions of the GDA have access via controlled use roads with one primary access available for the motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The MA 8 area will have access by trails and historically developed jeep roads.
Roadless Area Inventory	1-006 contains 9,194 acres. 1006A contains 1,202 acres. 1006F contains 13,960 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	9890	277	1592	21,275	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 2J (33,034 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 2993	MA 8 - 14,528	MA 11 - 192	MA 12 - 459	MA 13 - 130
MA 16 - 10,708	MA 20 - 3297	MA 22 - 552	MA 24 - 171	MA 29 - 4

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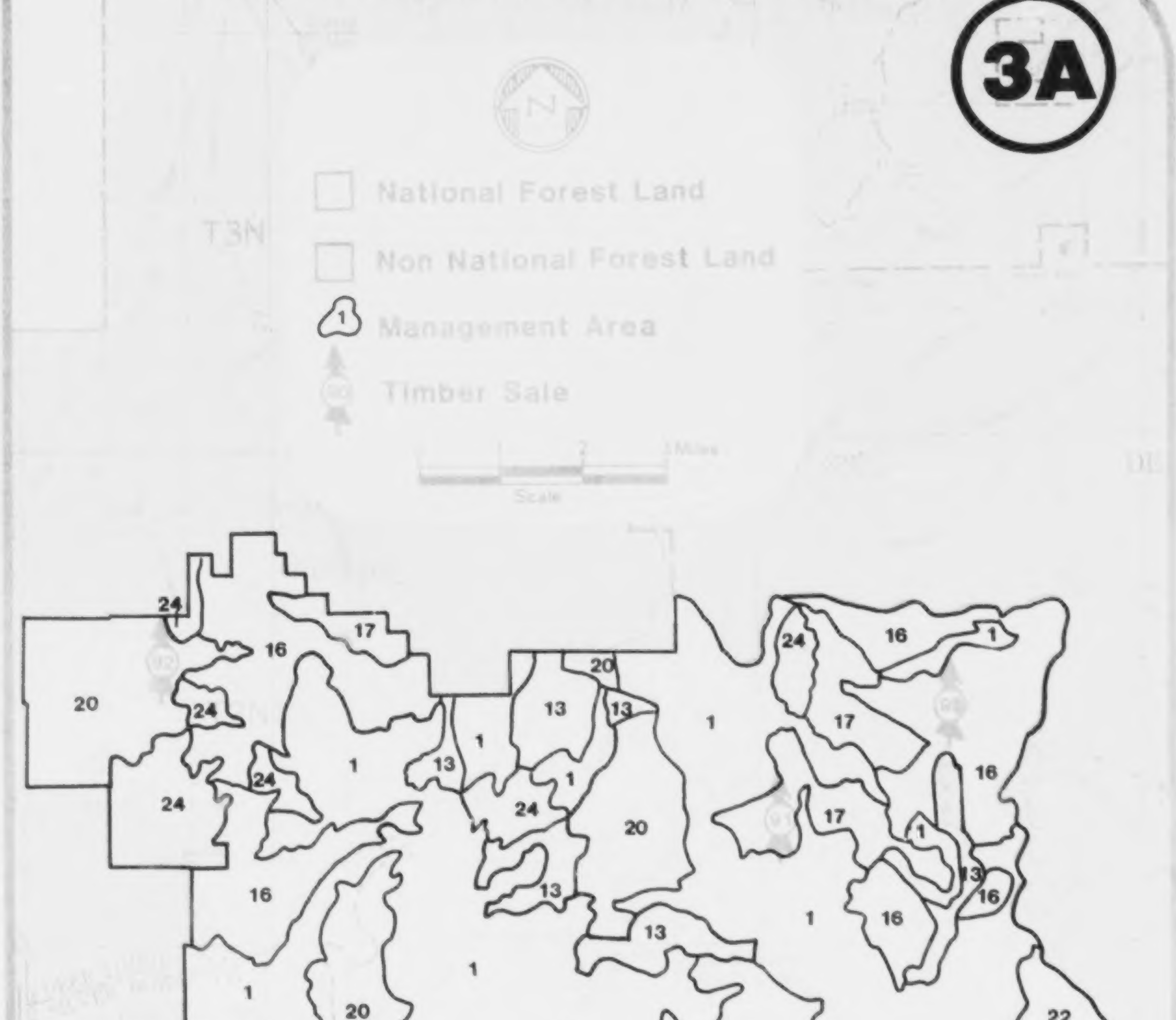
GEOGRAPHICAL DISPLAY AREA

VICINITY MAP

BEAVERHEAD
National Forest
MONTANA
FLEECER PLANNING UNIT

GEOGRAPHIC DISPLAY AREA

FLEECER PLANNING UNIT


3A
N
National Forest Land
Non National Forest Land
1 Management Area
92 Timber Sale
2
3 Miles
Scale
T3N
T1N
R12W
R11W
R10W
20
24
16
17
1
13
22
23
91
92
93

FLEECERS: GDA-3A	This GDA lies west of Fleecer Mountain. The GDA encompasses the area of National Forest ownership from Moose Creek east to Mitchell Park and north of the Big Hole River.
Vegetative Characteristics	Approximately three-fourths of the GDA is forested. Lodgepole pine is the major species, but large stands of Douglas-fir are found in lower Jerry Creek and on the slopes of the Fleecer Ridge. Scattered stands of Englemann spruce grow along creek bottoms, at the head of Long Tom Creek, and at higher elevations in the north-central part of the area. Whitebark pine is common along the higher ridges that surround the GDA. Grassland parks and meadows are scattered throughout, mainly at lower elevations along the alpine grassland along the north edge of the area. Open parks and willow bottoms are found in Lincoln Park, Moose Creek, lower Johnson Creek, Long Tom and Jerry Creeks, and to a lesser extent in the upper reaches of all drainages.
Wildlife and Fish	This GDA includes a spring-fall migration corridor for the Fleecer Mountain elk herd. Elk summer range is provided, with numerous parks and wallows. Most elk and deer winter on Fleecer Mountain, or on the sagebrush slopes south of the area.
Recreation	Dispersed recreation is intensive especially during the hunting season. No developed campgrounds are included.
Range	The GDA consists of scattered parks of primary range with large areas of secondary range. Clearcuts provide transitory grazing over much of the area.
Transportation System	Major access is provided via Moose Creek into the Lincoln Park area; from the south into Johnson Creek; from lower Jerry Creek into Long Tom and Indian Creek and from Divide Creek into the upper end of Jerry Creek. Numerous four-wheel-drive roads provide limited access to various parts of the GDA.
Minerals and Energy	A significant amount of minerals exploration has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use
Roadless Area Inventory	1-011 contains 15,853 acres. 1-012 contains 14,960

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	15,631	6511	840	25,089	767

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 3A (48,838 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 17,589	MA 11 - 979	MA 12 - 111	MA 13 - 2324	MA 16 - 8805
MA 17 - 2236	MA 20 - 8270	MA 22 - 869	MA 23 - 5106	MA 24 - 2549

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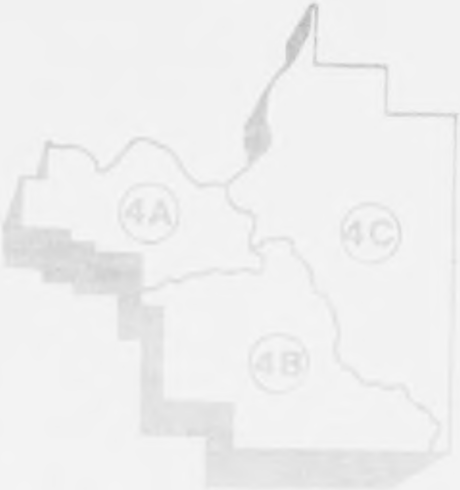
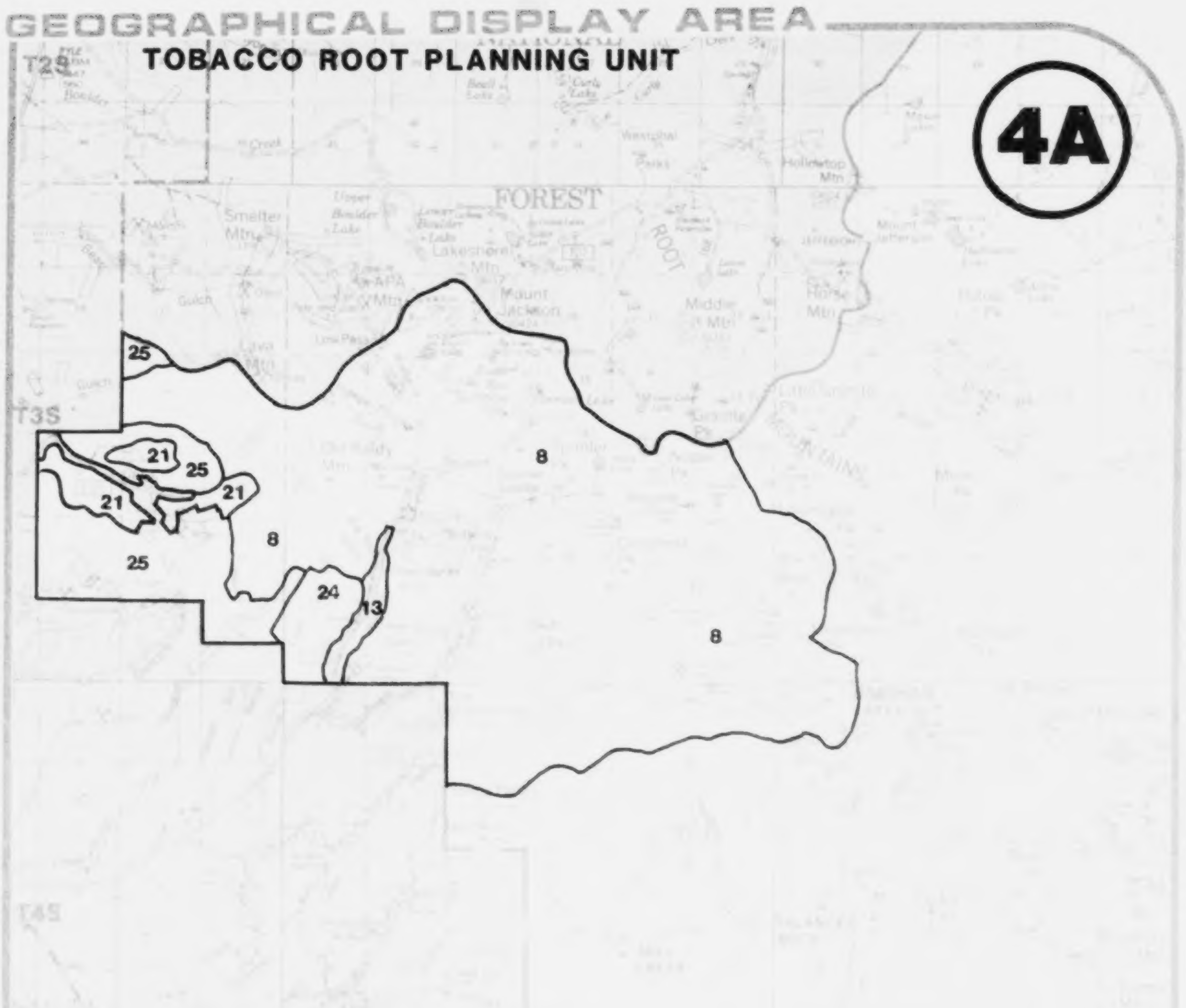
GEOGRAPHICAL DISPLAY AREA

VICINITY MAP



BEAVERHEAD
National Forest
MONTANA

TOBACCO ROOT
PLANNING UNIT


GEOGRAPHICAL DISPLAY AREA
TOBACCO ROOT PLANNING UNIT
4A
T2S
T3S
T4S
T5S
FOREST
ROOT
MOUNTAINS
Smelter Mtn
Upper Boulder Lake
Lower Boulder Lake
Lakeshore Mtn
Mount Jackson
Middle Mtn
Hollowtop Mtn
Mount Jefferson
Horse Mtn
Lava Mtn
Old Baldy Mtn
Westphal Parks
25
21
25
21
21
25
8
8
24
13
8
National Forest Land
Non National Forest Land
3 Management Area
Timber Sale
Miles
R5W
R4W
R3W

TOBACCO ROOT: GDA-4A	This GDA is comprised of the northwestern two-thirds of the Tobacco Root Range of the Beaverhead National Forest.
Vegetative Characteristics	Vegetative cover on lower elevation slopes is grassland, sagebrush and juniper, with scattered patches of timber. Mid-elevations are forested; lodgepole pine, Douglas-fir and Engelmann spruce are the dominant species. Whitebark pine is common at higher elevations, and alpine vegetation occurs above timberline, about 9,100 feet.
Water	Natural water turbidy is low and all continuous flowing streams support fisheries. Active irrigation dams, under Forest Service special use permit, occur on Twin, Jackson, Sunrise, Hill and Noble Lakes. The town of Sheridan obtains part of its domestic water supply from Indian Creek. Some stream bank disturbance relates to past placer mining operations.
Wildlife and Fish	Diverse habitats provide ecological niches for most species of birds and mammals common to southwestern Montana. Elk and deer winter range occurs along the southwestern side, and extends west onto Bureau of Land Management, State and private lands. The GDA contains numerous small lakes.
Recreation	The combination of clear mountain streams, small lakes, alpine flowers and rugged mountain peaks provides choice recreational settings.
Range	Two entire allotments (Wisconsin-Nugget and Noble-Indian). Grazing occurs from June 16 to October 15.
Timber	Present harvesting consists of small quantities of firewood, posts and poles.
Transportation System	The area is partly accessible by pickup or four-wheel-drive via old mining roads or primitive roads to small dams on high lakes. The Wisconsin Creek Road is moderately maintained and can be travelled by passenger car to Spuhler Gulch.
Minerals and Energy	A significant amount of mining activity has occurred and is occurring in this area. Several currently active mines are located within this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period whrn all or most axillary roads are closed to motorized use.
Roadless Area Inventory	B1013 contains 1,710 acres. C1013 contains 10,388 acres. D1013 contains 2,180 acres. E1013 contains 1,482 acres.

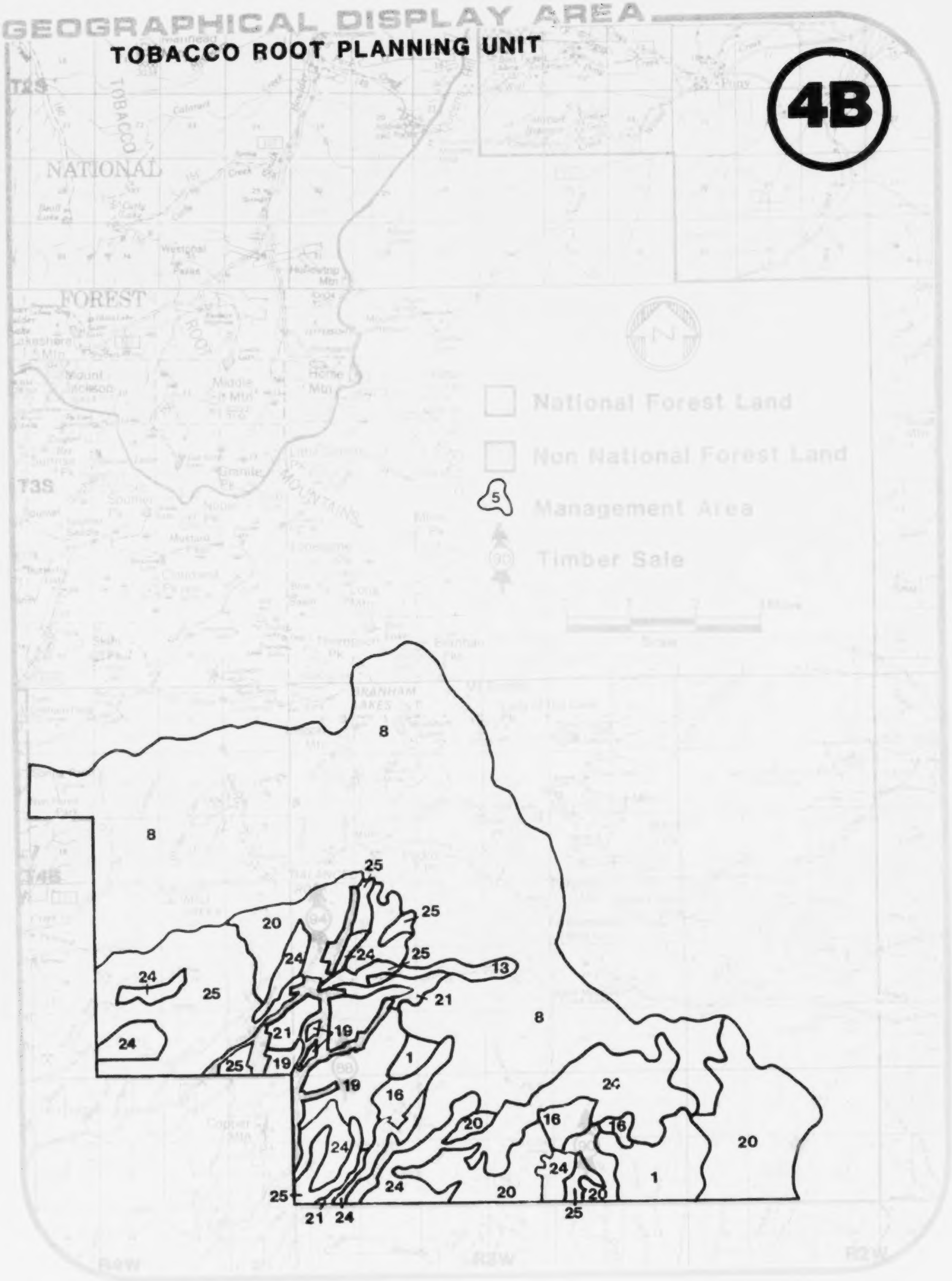
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	7425	11,530	1008	1149	0

GDA-Management Are Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 4A (21,112 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 8 - 17,132	MA 11 - 238	MA 12 - 2	MA 13 - 122	MA 21 - 711
MA 24 - 692	MA 25 - 2215			


GEOGRAPHICAL DISPLAY AREA
TOBACCO ROOT PLANNING UNIT
4B
National Forest Land
Non National Forest Land
5
Management Area
90
Timber Sale
Scale
Miles
T2S
T3S
T4S
R4W
R3W
R2W
TOBACCO
NATIONAL
FOREST
ROOT
MOUNTAINS
Mount Jackson
Middle Mtn
Home Mtn
Hollowtop Mtn
Granite Pk
Branham Lakes
Thompson Pk
Branham Pk
Copper Mtn
8
8
8
20
24
25
24
24
25
24
24
25
25
13
21
21
19
19
19
25
1
16
20
24
24
16
16
20
20
24
25
21
24
20
1
20
25
88
94

TOBACCO ROOT: GDA-4B	This GDA contains the southern portion of the Tobacco Root Mountain Range and is comprised of the area from Mill Creek to Granite Creek.
Vegetative Characteristics	Lower elevation slopes are grassland and sagebrush-grassland, with small patches of forest. Upper slopes are forested with lodgepole pine, Douglas-fir, Engelmann spruce, and whitebark pine.
Water	Natural water turbidity is low and all continuous flowing streams support fisheries.
Wildlife and Fish	The area provides habitat for many wildlife species. Big game species include elk, moose, mule deer, black bear, mountain lion, and mountain goat. This GDA contains deer and elk winter range. Moose winter along many creek bottoms. Ramshorn, Mill Gulch, California and Granite Creeks are fishable for small trout.
Recreation	The Mill Creek Road provides access to Branham Lakes at the fringe of the alpine zone. Three developed campgrounds, Mill creek, Balanced Rock and Branham Lakes, plus several small, undeveloped campsites are located along this road, and are the main developed and dispersed sites in the area. The combination of clear streams, small lakes, alpine plants and rugged peaks provides choice recreational settings.
Range	Three grazing allotments (Mill-Ramshorn, Biven-Harris and Granite Creek) are included. Livestock grazing permitted on the range from June 16 to October 15.
Timber	Commercial timber sales have been limited to small clearcuts and selective cuts. Present harvesting consists of small quantities of firewood, post-pole and sawlog type sales.
Transportation System	The Mill Creek Road to Branham Lakes and the Ramshorn Creek Road to the forks of Ramshorn Creek provide the only passenger car access. All other roads leading into this area provided access via pickups and four-wheel-drive vehicles. A network of trails connects the upper basins of Mill Creek, Mill Gulch and Ramshorn Creek.
Minerals and Energy	A significant amount of exploration and mining activity has occurred and is occurring in this area. A number of active mines and several producing mines are included in the area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	D1013 contains 1,485 acres. E1013 contains 4,536 acres. F1013 contains 9,120 acres.

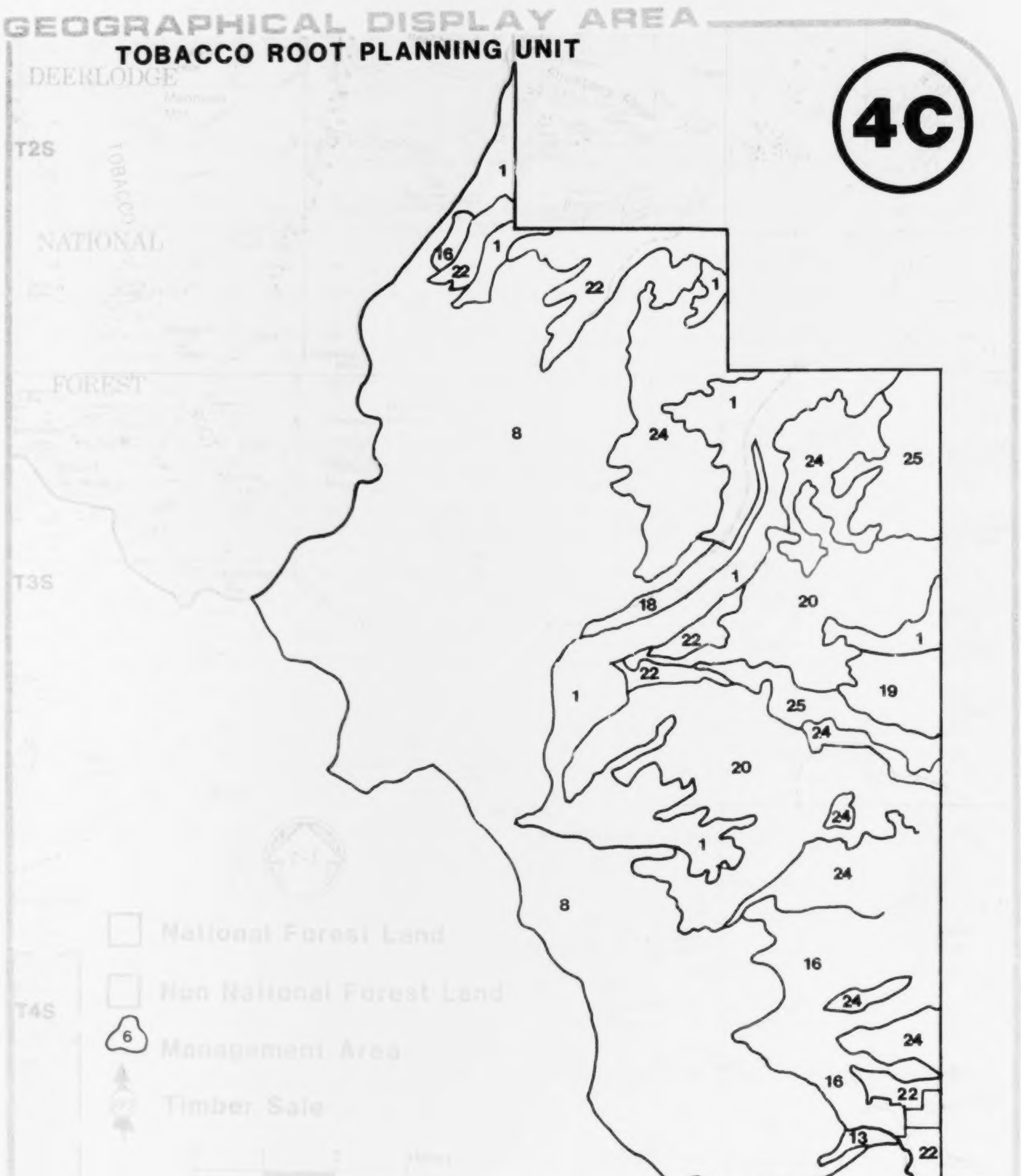
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	3111	11,944	5365	14,531	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 4B (34,951 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 1072	MA 3 - 9	MA 8 - 18,074	MA 11 - 607	MA 12 - 17
MA 13 - 166	MA 16 - 617	MA 19 - 1645	MA 20 - 4601	MA 21 - 994
MA 24 - 3832	MA 25 - 3317			


GEOGRAPHICAL DISPLAY AREA
TOBACCO ROOT PLANNING UNIT
4C
DEERLODGE
NATIONAL
FOREST
TOBACCO
T2S
T3S
T4S
National Forest Land
Non National Forest Land
6
Management Area
Timber Sale
Miles
R4W
R3W
R2W
1
16
22
1
22
1
8
1
24
24
25
1
18
20
22
22
1
1
19
25
24
20
24
1
24
8
16
24
24
16
22
13
22
20
24

TOBACCO ROOT: GDA-4C	This GDA is comprised of that part of the Forest located on the eastern slopes of the Tobacco Root Mountains. In 1984 Madison County proposed a communications relay atop Mount Jefferson.
Vegetative Characteristics	Grassland and sagebrush occurs on south-facing slopes and in large parks in the east half of the GDA. Mid-elevation slopes are forested, with lodgepole pine, Douglas-fir and Engelmann spruce the dominant species. Whitebark pine occupies higher elevation ridges and cirque basins. Alpine vegetation occurs above timberline, which is about 9,000 feet.
Water	The capacity of this GDA to produce water is high. Numerous small lakes occur in the high basins. The area contains seven irrigation dams and reservoirs.
Wildlife and Fish	Grizzly bears occasionally visit the area. Big game include elk, moose, mule deer, black bear, and mountain lion. Mountain goats are found along the high crest of the GDA. Elk and deer winter along the eastern edge of the GDA and on adjacent lands. Meadow Creeks and Willow Creeks support a fishery, as do about sixteen small lakes.
Recreation	The GDA provides high quality recreational opportunities. Most recreational use is dispersed, since the area contains only one developed campground. The area is hunted heavily.
Range	Three grazing allotments encompass most of the GDA. These allotments are managed under intensive management systems.
Timber	Timber harvesting has been a long time use. Most cutover lands are now stocked with poles and small-size sawlog timber.
Transportation System	Approximately 25 miles of good road provide access. South Meadow Creek, North Meadow Creek and South Willow Creek are served by good access roads. Low standard roads and Jeep trails provide access at a number of other locations.
Minerals and Energy	A significant amount of mining activity has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	A1013 contains 5,353 acres. F1013 contains 13,681 acres. G1013 contains 7,680 acres. 1-013 contains 721 acres. 1-014 contains 5,465 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	6202	24,170	3380	24,310	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 4C (58,062 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 5967	MA 3 - 9	MA 8 - 25,025	MA 11 - 940	MA 12 - 7
MA 13 - 176	MA 16 - 3209	MA 18 - 435	MA 19 - 760	MA 20 - 9891
MA 22 - 2492	MA 24 - 6814	MA 25 - 2337		

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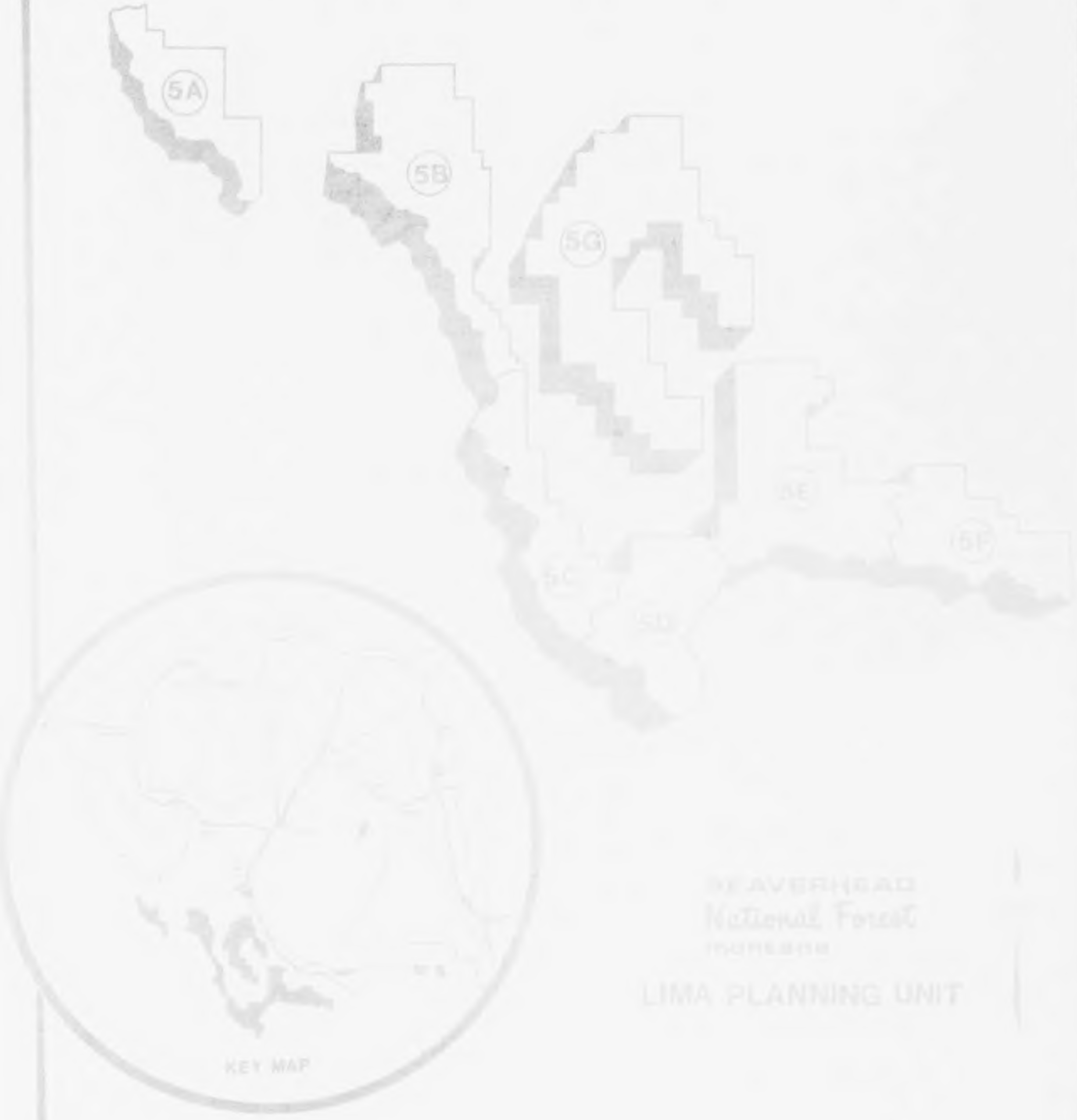
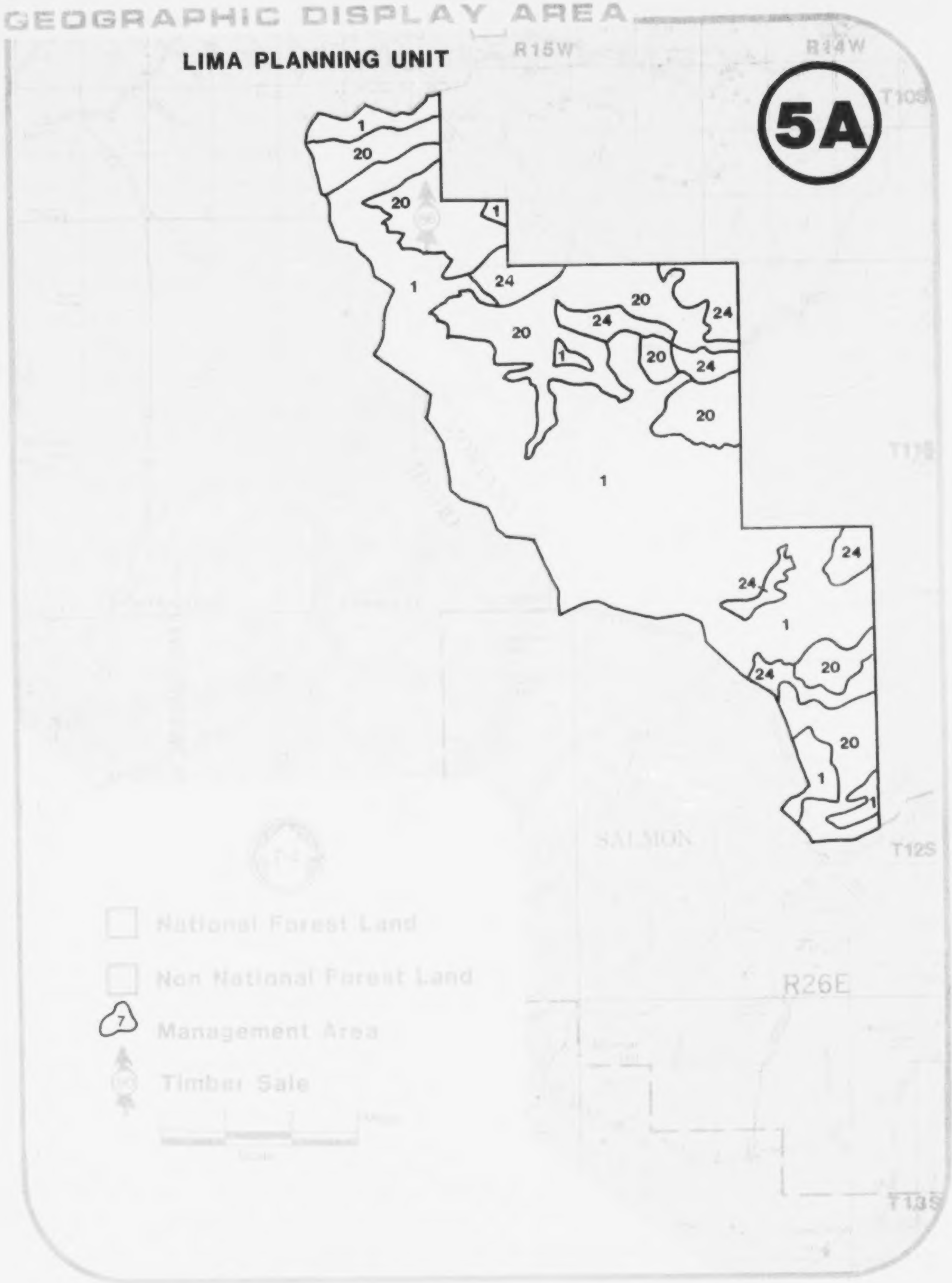
GEOGRAPHICAL DISPLAY AREA

VICINITY MAP


5A
5B
5G
5E
5F
5C
5D
KEY MAP

BEAVERHEAD
National Forest
MONTANA

LIMA PLANNING UNIT


GEOGRAPHIC DISPLAY AREA
LIMA PLANNING UNIT
5A
R15W
R14W
T10S
T11S
T12S
T13S
R26E
SALMON
1
20
24
National Forest Land
Non National Forest Land
7
Management Area
Timber Sale
Miles
Scale

LIMA: GDA-5A	The major drainages in this GDA are Black Canyon and Frying Pan Creeks.
Vegetative Characteristics	Grassland and sagebrush-grassland with scattered patches of Douglas-fir occurs on lower elevation and south-facing slopes. Mid-elevation and north-facing slopes are forested, with lodgepole pine, subalpine fir, and Engelamnn spruce the dominant species. Douglas-fir occurs at lower elevations and on southerly aspects. At higher elevations the forest grades into whitebark pine and subalpine fir forest.
Water	The capacity of the GDA to receive, store, and produce water is fairly low. Turbidity in Frying Pan and Trail Creek are high.
Wildlife and Fish	Big game include elk. moose, mule deer, antelope, black bear, and mountain lion. The Northern Rocky Mountain Wolf, an endangered species, is occaisionally sighted in the area. The area contains excellent elk and summer range. Some elk winter range occurs along the eastern Forest boundary. Moose winter in many creek bottoms. Most elk in the area migrate to Idaho.
Recreation	Recreation use is moderate to low with hunting the predominant recreation use. The GDA contains a potential Continental Divide National Recreation Trail corridor.
Range	Primary range consists of open grasslands at lower elevations. Cattle graze the area from mid or late June through September.
Timber	Timber harvesting has been limited to small quantities of firewood, posts, poles and Christmas trees. Two timber sales are currently in the area
Transportation System	Access is provided by low standard primitive roads. Adequate legal public access exists.
Minerals and Energy	A portion of the Lemhi Pass Thorium District is included in the northern portion of this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The area south of Nip & Tuck has access via controlled use roads that are closed to motorized access during sensitive times of the year.
Roadless Area Inventory	1-015 contains 8,252 acres. 1-944 contains 9,454 acres.

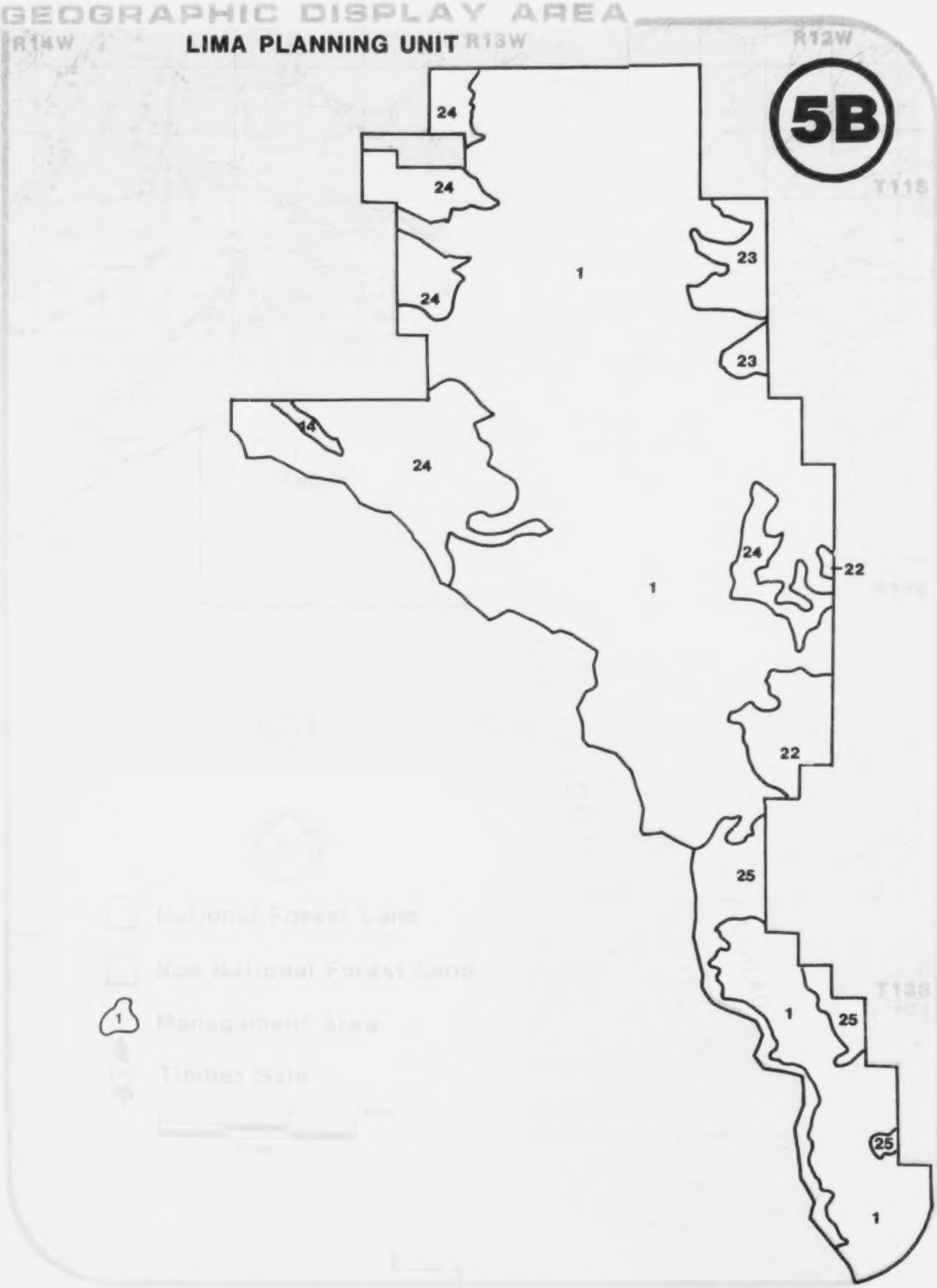
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	4970	5487	0	12,760	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 5A (23,217 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA- Acres
MA 1 - 13,630	MA 3 - 12	MA 11 - 99	MA 20 - 6919	MA 24 - 2557


GEOGRAPHIC DISPLAY AREA
LIMA PLANNING UNIT
R14W
R13W
R12W
5B
T11S
T13S
24
24
24
24
14
1
1
1
1
23
23
24
22
22
25
25
25
National Forest Land
Non National Forest Land
Management Area
Timber Sale

LIMA: GDA-5B	This GDA contains the area around Maiden Peak and south to Craver Creek.
Vegetative Characteristics	Lower elevation and south-facing slopes have grassland and sagebrush-grassland cover, with scattered patches of Douglas-fir. Mid-elevation and north-facing slopes are forested with lodgepole pine, subalpine fir, Engelmann spruce and Douglas-fir. Whitebark pine grows at higher elevations and along forested ridgetops.
Water	The GDA's capacity to receive, store and produce water is high. Natural water turbidity is moderate.
Wildlife and Fish	Big game species include elk, moose, mule deer, antelope, black bear, mountain lion, and mountain goat. The area contains excellent elk and deer summer range. Elk winter mostly in the northwest portion of the GDA. Mountain goat habitat is found mainly on high ridges in the vicinity of Maiden Peak. The area contains Lake Canyon and Dad Creek Lakes, both of which have fishable populations of cutthroat trout.
Recreation	This GDA has high recreation values, but has not been used extensively for recreation. Hunting and fishing are the major recreational uses. The area contains a potential Continental Divide National Recreation Trail corridor.
Range	Primary range is mostly open grassland at lower elevations. Cattle and sheep graze the area from early June through September.
Timber	Timber harvesting prior to 1967 was limited to small quantities of posts, poles, and bridge timbers. A small amount of commercial timber has been removed from Keystone Creek since 1967.
Transportation System	Main access roads are low standard. Many roads across private land provide access to lower elevation portions of the area. The only road with public right-of-way is in Keystone creek.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	1-945 contains 38,955 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	16,140	26,700	0	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

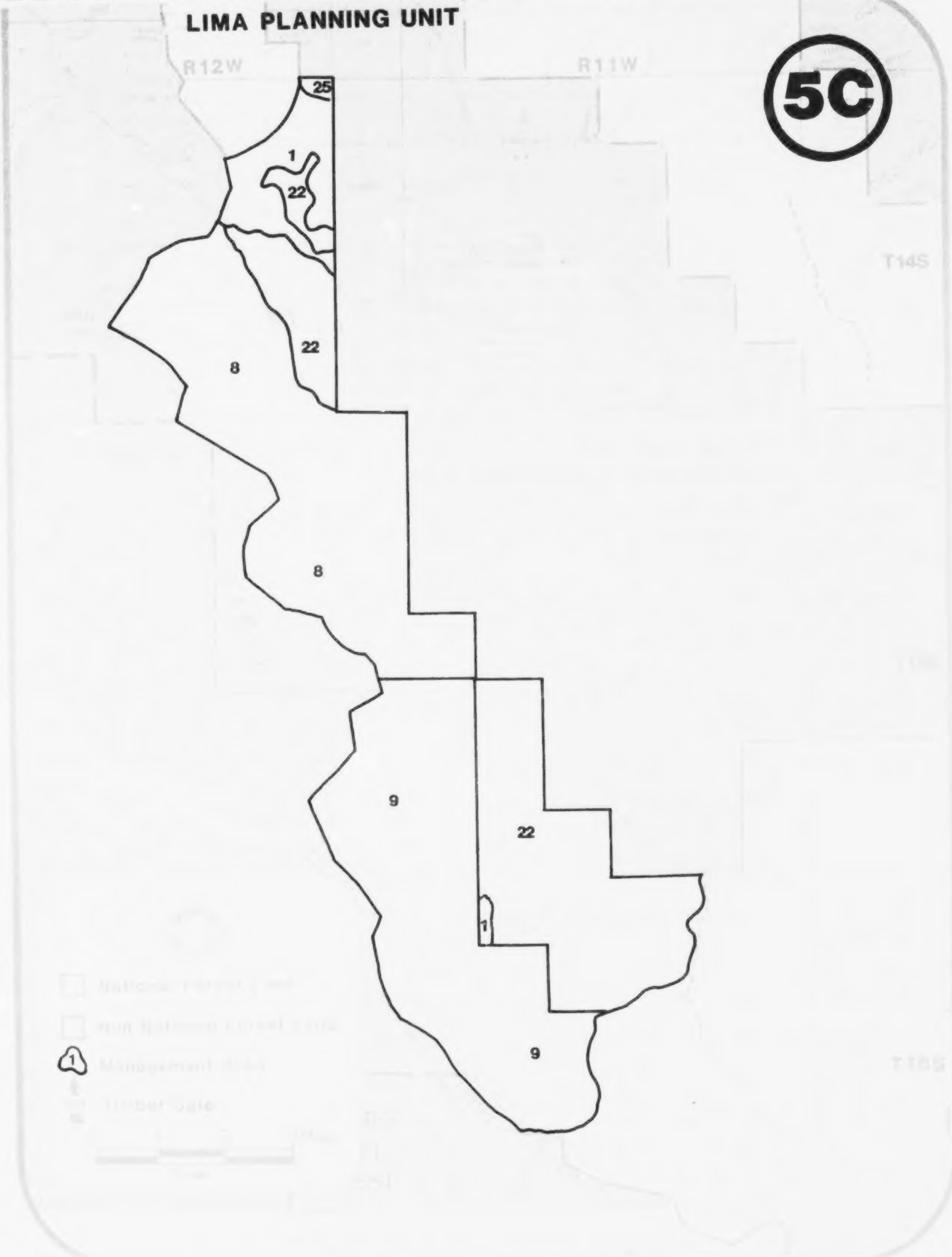
GDA 5B (42,840 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 31,581	MA 3 - 1	MA 11 - 345	MA 14 - 106	MA 22 - 1053
MA 23 - 1127	MA 24 - 6517	MA 25 - 2110		

GEOGRAPHIC DISPLAY AREA

LIMA PLANNING UNIT

5C


R12W
R11W
25
1
22
22
8
8
9
22
1
9
T14S
T15S
National Forest Land
Non National Forest Land
1 Management Area
Timber Sale

LIMA: GDA-5C	This GDA contains the west portion of the Big Sheep basin between Nicholia Creek and the Morrison Lake area.
Vegetative Characteristics	Vegetation at low elevations and on south-facing slopes is grassland and sagebrush-grassland, with small patches of Douglas-fir. North-facing slopes at mid-elevations contain small patches of forest, mostly lodgepole pine and Douglas-fir, plus some subalpine fir and Engelmann spruce. Whitebark pine is the dominant species at higher elevations. Subalpine grassland and alpine vegetation grow at the higher elevations.
Water	The GDA's capacity to receive, store and produce water is high. Turbidity is high.
Wildlife and Fish	Big game species include elk, moose, mule deer, antelope, black bear, mountain lion, and mountain goat. Mountain goat habitat is located mainly in the Morrison Lake area. The endangered Northern Rocky Mountain Wolf has been observed in this area. No deer or elk winter range exists. Elk migrate to Idaho and further east in Montana to winter. Morrison Lake contains lake trout.
Recreation	Potential for recreation is high, but present use is light. The area contains a potential Continental Divide National Recreation Trail corridor.
Range	Primary range occurs as both high alpine grassland and lower foothills containing sagebrush and grass. Cattle and sheep graze in the area from mid or late June through the middle of October.
Timber	Trees are scattered throughout the GDA. The chief value of the existing stands is their ability to provide wildlife cover.
Transportation System	Main access roads are low standard or vehicle tracks. Legal rights-of-way are needed to Nicholia, Meadow and Rock Creek Roads.
Area Access Guidelines	Access via controlled roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The MA 9 area has access by trails and historically developed jeep roads.
Roadless Area Inventory	A1945 contains 11,943 acres. 1-945 contains 11,161 acres.

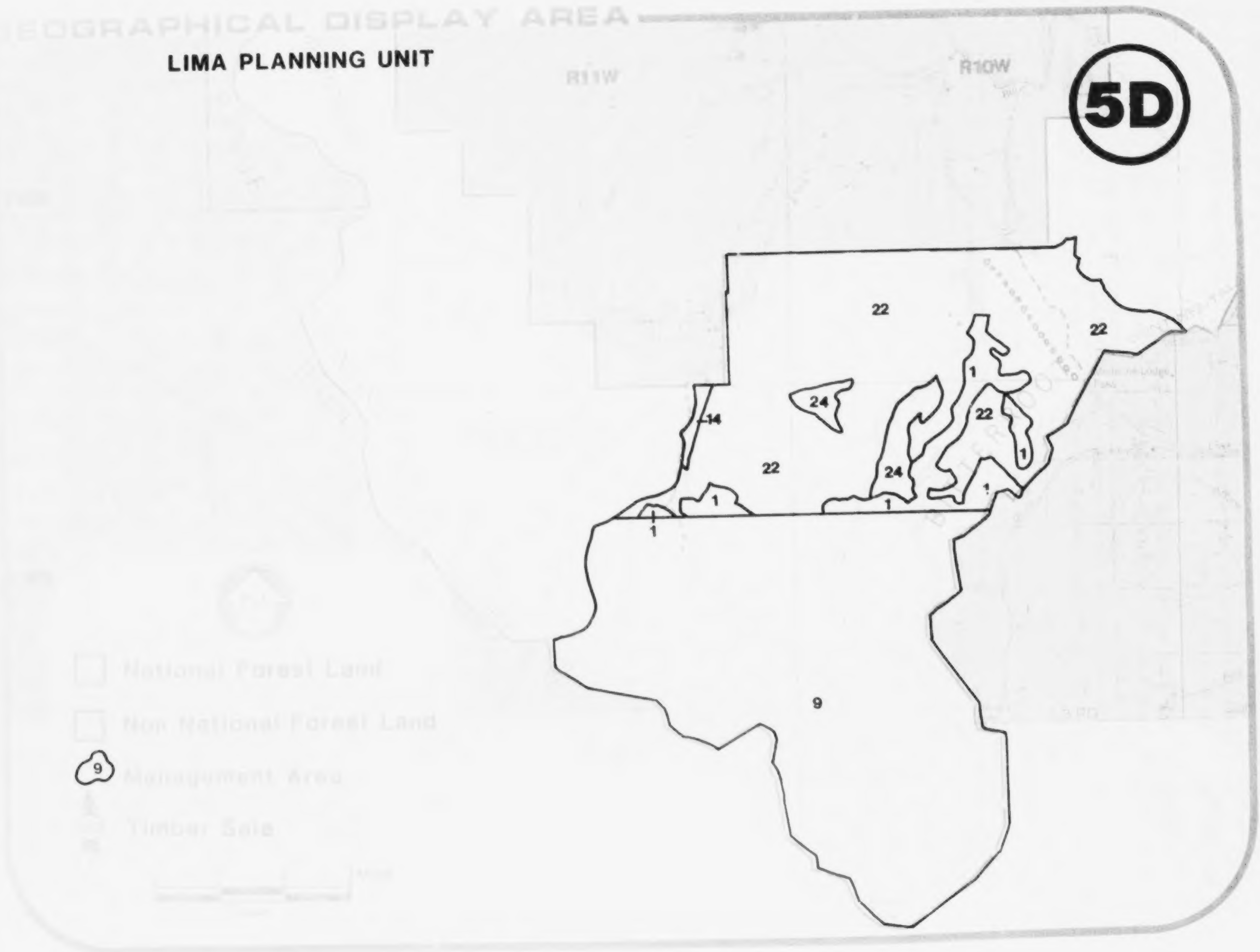
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	15,299	11,317	0	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 5C (26,616 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 1778	MA 3 - 2	MA 8 - 8472	MA 9 - 8667	MA 11 - 210
MA 22 - 7415	MA 25 - 72			


GEOGRAPHICAL DISPLAY AREA
LIMA PLANNING UNIT
5D
R11W
R10W
22
22
22
22
24
24
1
1
1
1
1
1
1
14
9
National Forest Land
Non National Forest Land
9
Management Area
Timber Sale

LIMA: GDA-5D	**This GDA contains the south portion of the Big Sheep basin from Nicholia Creek to Pine Creek.**
Vegetative Characteristics	Vegetation at low elevations and on south-facing slopes is grassland and sagebrush-grassland, with small patches of Douglas-fir, plus some subalpine fir and Engelmann spruce. Whitebark pine is the dominant species at higher elevations. Subalpine grassland and alpine vegetation grow at the higher elevations.
Water	The GDA's capacity to receive, store and produce water is high. There are several irrigation ditches. Turbidity is high.
Wildlife and Fish	Big game species include elk, moose, mule deer, antelope, black bear, bighorn sheep, mountain lion, and mountain goat. The are has excellent deer and elk summer range. A small elk winter range is located north of Deadman Lake. Moose winter in many creek bottoms. Mountain goat and bighorn sheep habitat is located mainly in the Italian Peak area. The GDA contains Deadman Lake, which has a fishable population of trout.
Recreation	Potential for recreation is high, but present use is light. The area contains a potential Continental Divide National Recreation Trail corridor.
Range	Primary range occurs as both high alpine grassland and lower foothills contain sagebrush and grass. Cattle graze the area from mid to late June through the middle of October.
Timber	Trees are scattered throughout the area. The chief value of the existing stands is their ability to provide wildlife cover.
Transportation System	Main access roads are low standard or vehicle tracks.
Minerals and Energy	A significant amount of oil and gas exploration has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The MA 9 area has access by trails or historically developed jeep roads.
Roadless Area Inventory	A1945 contains 15,872 acres. I1945 contains 12,986 acres. acres. 1-961 contains 1,120 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	7335	11,455	11,130	1313	0	0

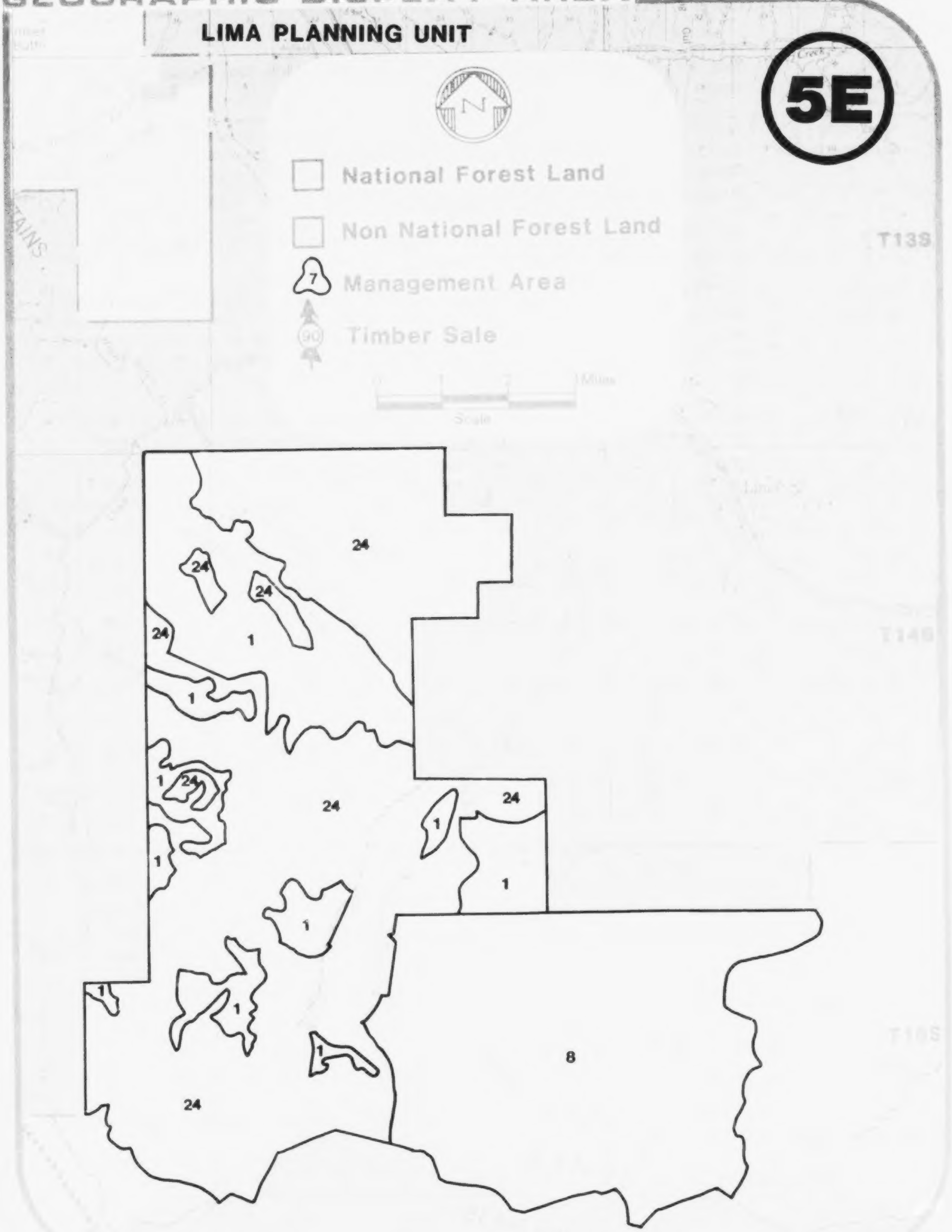
GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 5D (31,233 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 1519	MA 3 - 2	MA 9 - 16,997	MA 11 - 310	MA 14 - 40
MA 22 - 11,624	MA 24 - 741			

GEOGRAPHIC DISPLAY AREA

LIMA PLANNING UNIT


5E
National Forest Land
Non National Forest Land
7
Management Area
90
Timber Sale
Miles
Scale
T13S
T14S
T15S
24
24
24
24
1
1
1
24
24
24
1
1
1
1
1
1
24
8

LIMA: GDA-5E	This GDA contains White Pine Ridge and Little Sheep Creek.
Vegetative Characteristics	Vegetation on most of the area is grassland and sagebrush-grassland, with small patches of forest on north-facing slopes at mid and high elevations. Predominant tree species are Douglas-fir and lodgepole pine and some subalpine fir and Engelmann spruce. Whitebark pine occurs on rocky ridgetops and at higher elevations.
Water	The GDA's capacity to receive, store and produce water is fairly low. Spring runoff produces a heavy sediment load, particularly in the Middle Fork of Little Sheep Creek.
Wildlife and Fish	Big game species include elk, moose, mule deer, antelope, black bear, mountain lion, mountain goat. The area contains good elk and deer summer-fall range. moose winter in many creek bottoms. Important mule deer and elk wintering areas is located in this GDA. Bighorn sheep use the northern portion of the area. Fork of Little Sheep Creek. Range condition is good to excellent on key elk winter range.
Recreation	The main recreational use is big game hunting. The East Fork of Little Sheep Creek contains a developed campground with four tables. The area contains a potential Continental Divide National Recreation Trail corridor.
Range	Primary range occurs at all elevations. Cattle graze from July 1 through mid-October.
Timber	Until 1970, timber harvesting was light, principally for posts and poles. Since 1970, timber harvesting has occurred on White Pine Ridge.
Transportation System	The main access road is in Little Sheep Creek. Right-of-way has been obtained to the Forest boundary, but not through homesteads in the Middle and West Forks of Little Sheep Creek.
Minerals and Energy	A significant amount of oil and gas exploration has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. MA 8 has access by trails or historically developed jeep roads.
Roadless Area Inventory	1-020 contains 7,523 acres. 1-961 contains 21,230 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	13,454	27,215	6265	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

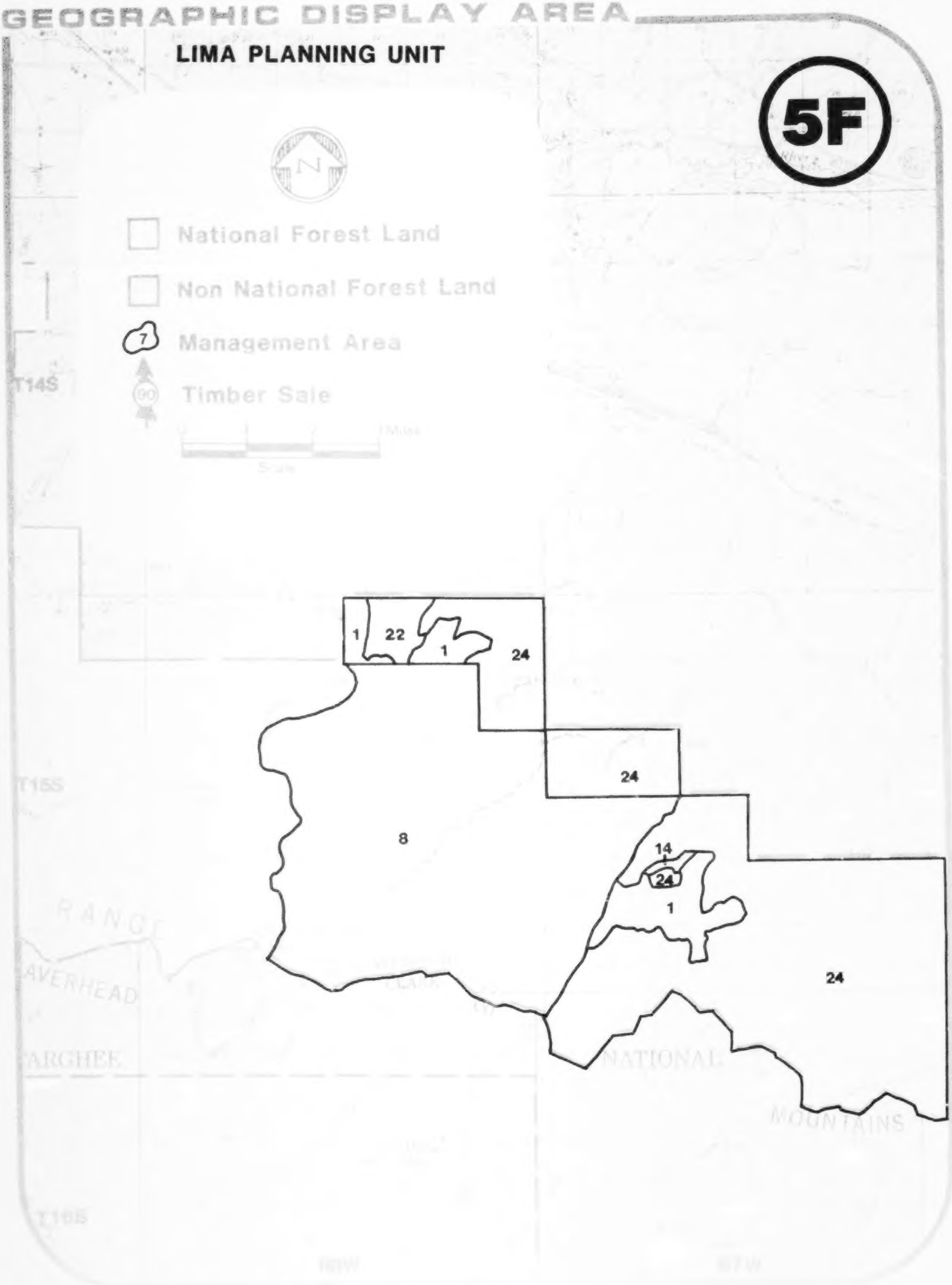
GDA 5E (46,934 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 8883	MA 3 - 3	MA 8 - 15,365	MA 11 - 250	MA 12 - 2
MA 24 - 22,431				

GEOGRAPHIC DISPLAY AREA

LIMA PLANNING UNIT

5F


N
National Forest Land
Non National Forest Land
7
Management Area
90
Timber Sale
Miles
Scale
T14S
T15S
T16S
1
22
1
24
24
8
14
24
1
24
RANGE
BEAVERHEAD
TARGHEE
NATIONAL
MOUNTAINS

LIMA: GDA-5F	This GDA contains Sawmill Creek and the area east to Middle Creek.
Vegetative Characteristics	Vegetation on the east half of the GDA is predominantly grassland and sagebrush-grassland, with small patches of aspen and Douglas-fir on north-facing slopes at mid-elevation. In the west half, grassland occupies the lower elevation footslopes; forest occurs on north-facing slopes from mid-elevation to the Divide. Predominant tree species are Douglas-fir, subalpine fir, Engelmann spruce and quaking aspen.
Water	The GDA's capacity to store water is moderate. Spring runoff and spring rains often produce heavy sediment loads. Water turbidity is high.
Wildlife and Fish	The area is very important to big game, especially elk. The headwaters of Sawmill Creek is an elk calving area. The southern end along the Continental Divide is very important big game summer range. Moose winter in Shineberger, Beaver and Sawmill Creeks. Elk winter through a large portion of the GDA.
Recreation	Recreational use is mainly big game hunting. The area contains a potential Continental Divide National Recreation Trail corridor.
Range	Primary range occurs mainly on the lower foothills. Cattle graze the area from July through mid to late October.
Timber	Little timber has been harvested from the area.
Transportation System	Access is gained by the Sawmill road which is surfaced.
Minerals and Energy	A significant amount of oil and gas exploration has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	1-961 contains 20,351 acres.

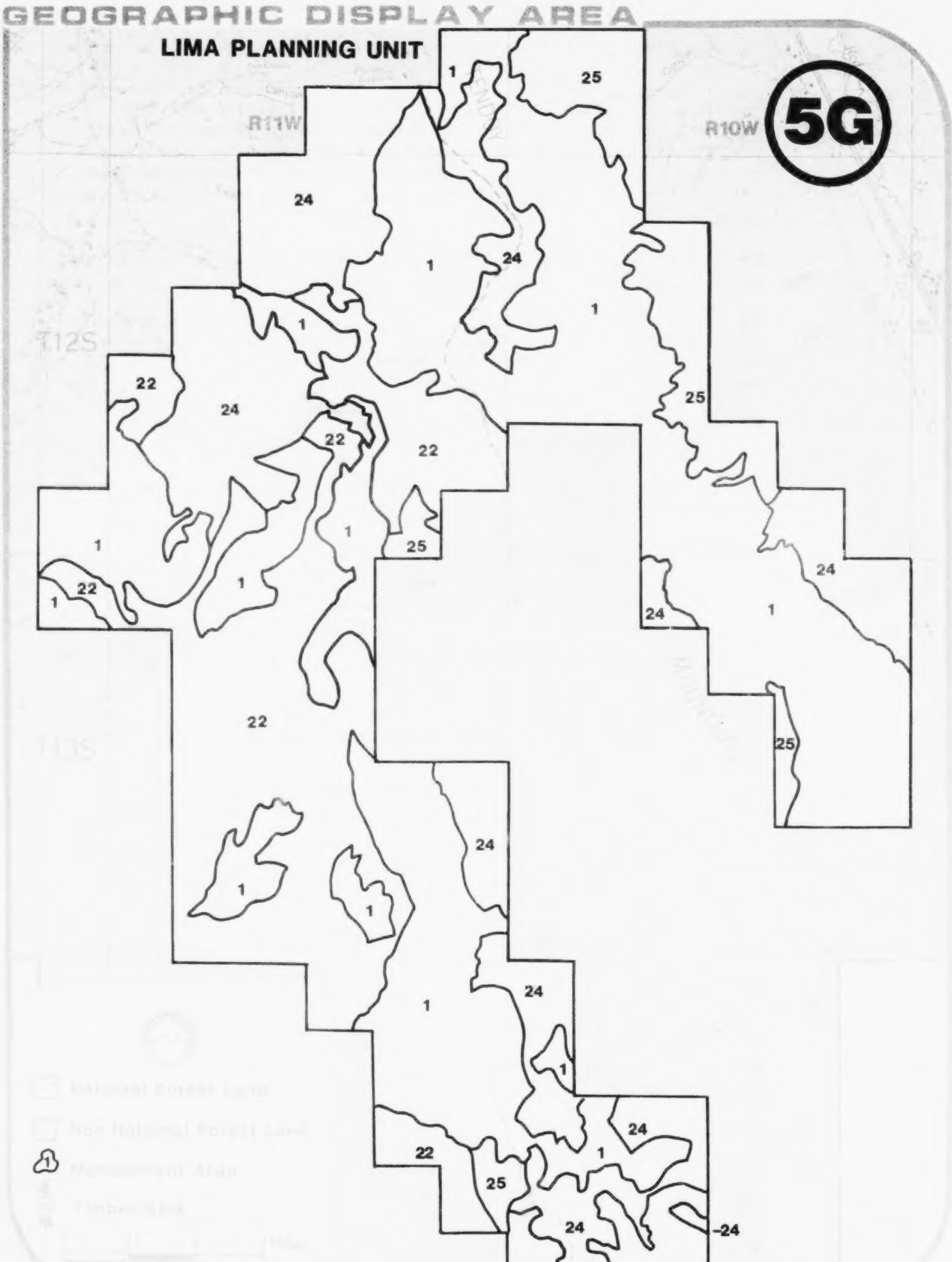
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	18,144	7070	3080	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Aeas 3, 11 and 12.

GDA 5F (28,294 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 1699	MA 3 - 2	MA 8 - 13,201	MA 11 - 195	MA 14 - 45
MA 22 - 491	MA 24 - 12,661			


GEOGRAPHIC DISPLAY AREA
LIMA PLANNING UNIT
5G
R11W
R10W
T12S
T13S
1
22
24
25
National Forest Land
Non National Forest Land
Management Area
Timber Area
Miles

LIMA: **GDA-5G**	This GDA includes all of the Tendoy Mounains.
Vegetative Characteristics	Lower slopes and foothills are grassland and sagebrush-grassland. The north and notheast-facing slopes of the Tendoys are forested with Douglas-fir, the dominant species. Some lodgepole pine and whitebark pine occurs at higher elevations. The higher elevation west-facing slopes have grassland and subalpine grassland cover.
Water	Capacity to produce water is low. Water turbidity is moderate. On the east side, the one stream in Little Water Canyon becomes intermittent or ephemeral.
Wildlife and Fish	Big game species include elk, moose, mule deer, antelope, black bear, and mountain lion. Bighorn sheep have been recently been reintroduced in the area near Dixon Mountain. A large portion of the GDA contains deer or elk winter range.
Recreation	The potential for recreation use is low.
Range	The primary range occurs at all elevations. Cattle graze in the area from early June to early November. Sheep graze from July through September.
Timber	Timber harvesting has been limited to incidental harvest of poles, posts, and a few bridge timbers for general ranch use.
Transportation System	The transportation system consists primarily of primitive four-wheel-drive roads.
Minerals and Energy	A significant amount of oil and gas exploration has occurred and is occurring in this area. A wildcat well currently is being drilled within the area.
Area Access Guidelines	Access via roads and trails open to motorized public access, with no restrictions.
Roadless Area Inventory	1-016 contains 33,652 acres. 1-017 contains 14,838 acres. 1-018 contains 5,018 acres. 1-019 contains 3,982 acres. 1-020 contains 714 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	16,100	54,187	350	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 3, 11, and 12.

GDA 5G (70,637 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 34,699	MA 3 - 5	MA 11 - 87	MA 22 - 15,227	MA 24 - 15,341
MA 25 - 5278				

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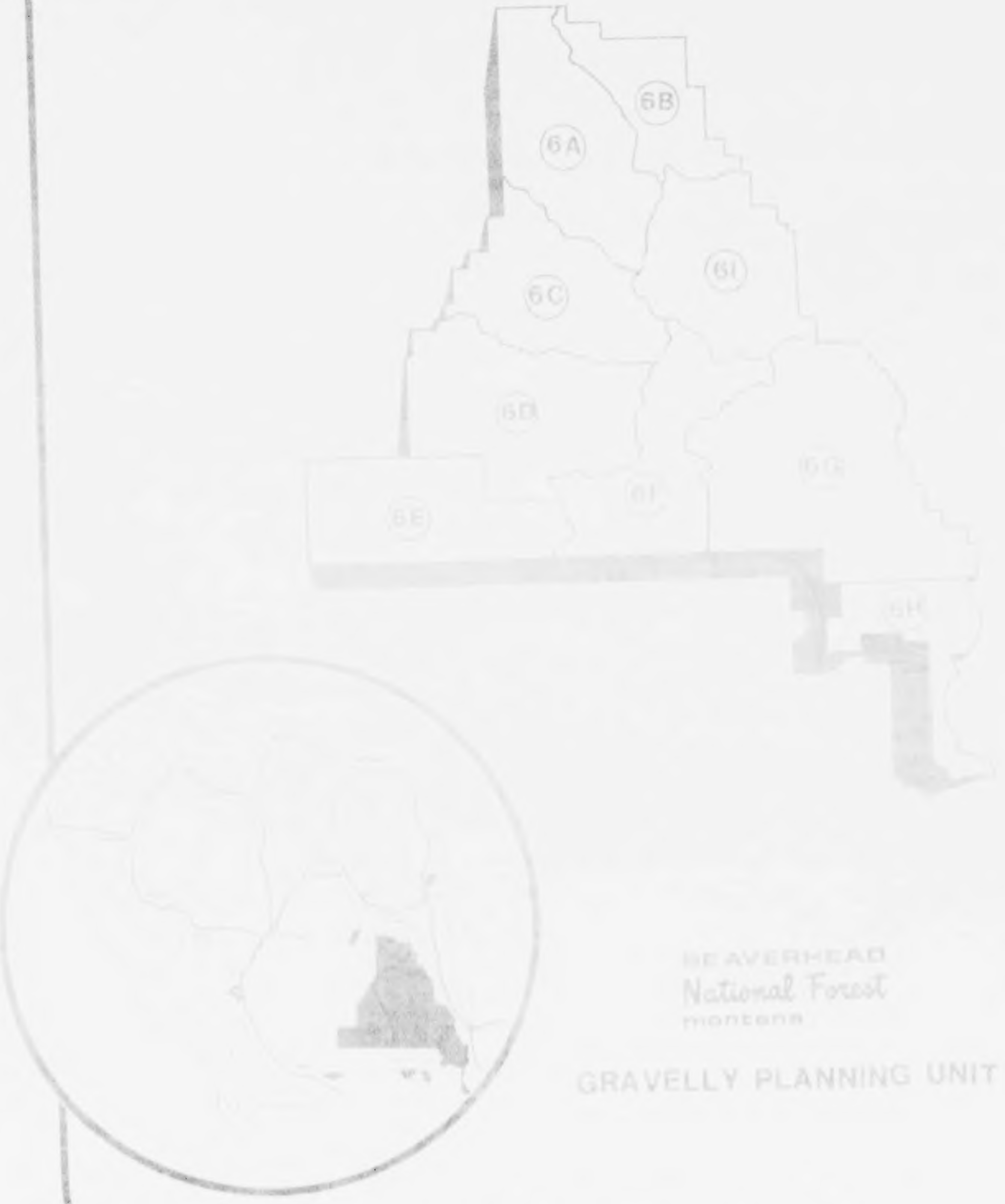
GEOGRAPHICAL DISPLAY AREA

VICINITY MAP

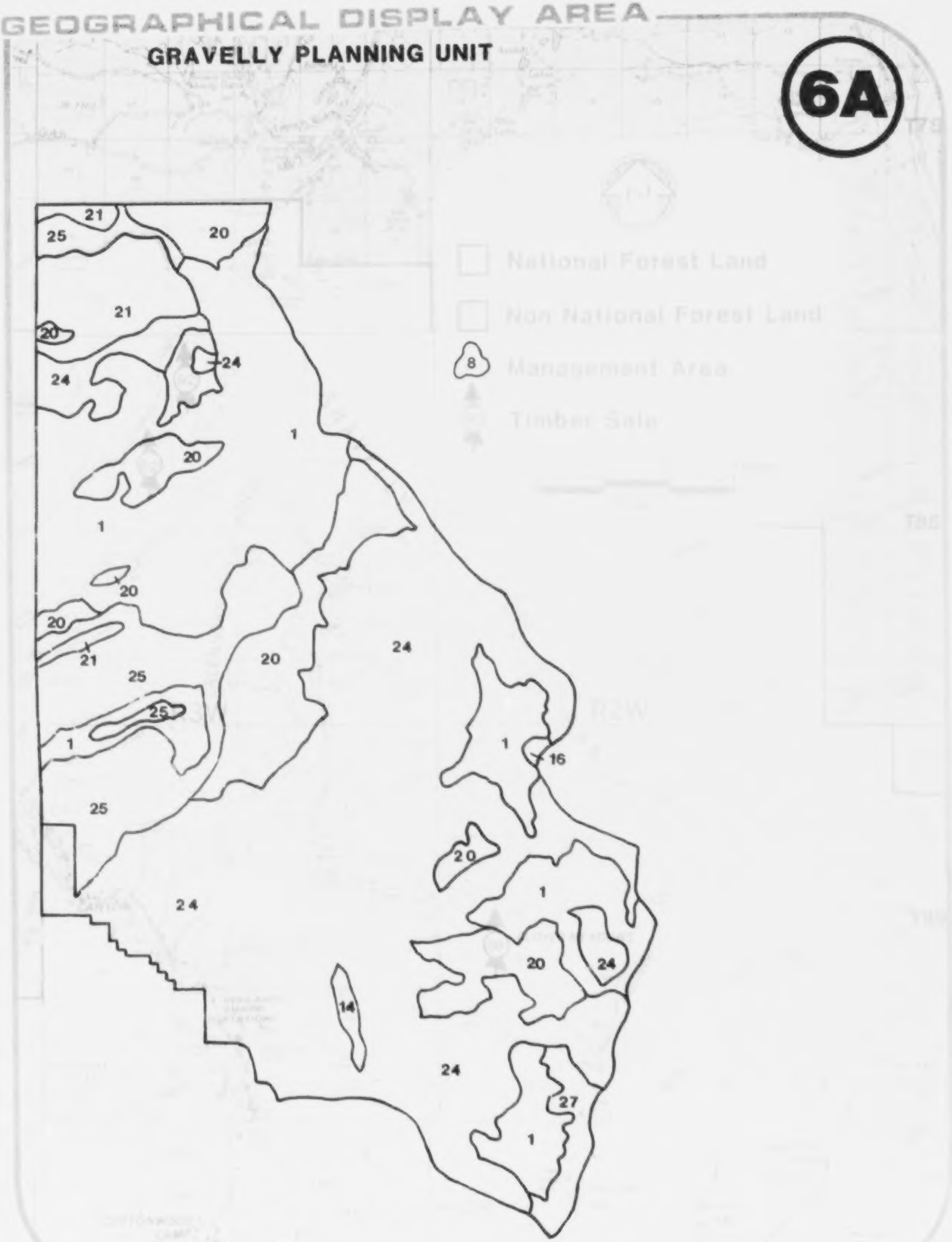

6A
6B
6C
6D
6E
6F
6G
6H
6I

BEAVERHEAD
National Forest
montana

GRAVELLY PLANNING UNIT

GEOGRAPHICAL DISPLAY AREA

GRAVELLY PLANNING UNIT


6A
National Forest Land
Non National Forest Land
8
Management Area
Timber Sale
T7S
T8S
R3W
R2W
21
25
20
21
20
24
24
1
20
1
20
20
21
25
20
24
25
1
16
25
20
1
24
20
24
14
24
27
1
R2W
R3W

GRAVELLY: GDA-6A This GDA contains land in the Idaho, Greenhorn and Warm Springs Creek drainages. Private land consists of patented placer claims in the North Fork of Greenhorn creek, Idaho Creek, Warm Springs, and at the head of Alder Gulch.

Vegetative Characteristics Lower elevation and south-facing slopes are grassland and sagebrush-grassland, with some open stands of Douglas-fir. Mountain mahagony is common on lower elevation south-facing slopes. North slopes at mid-elevations are forested with ldogepole pine, Douglas-fir and Engelmann spruce.

Water Natural water turbidity is low and all continuous flowing streams support fish. Water is used for downstream irrigation.

Wildlife and Fish Big game species include elk, moose, mule deer, whitetail deer, antelope, black bear, mountain lion, and mountain goat. Bald eagles are seen along the Ruby River in the fall and early winter. Grizzly bear have been sighted in the area. The area contains excellent big game habitat. Big game winter range occurs from Idaho Creek southward to the Ruby River, then to Warm Springs. Skeletal remains of bighorn sheep have been found in the area, which suggests habitat may be suitable for reintroduction of this species.

Recreation Present recreation use is mainly hunting with some hiking and backpacking.

Range There are three cattle and horse (C&H) allotments, plus parts of two other C&H allotments.

Timber Present harvesting is limited to small quantities of firewood, posts, poles and sawlogs.

Transportation System The Ruby River, Timber Creek, and Warm Springs Roads are the major roads in this area. Other than these, there is no public access to this area.

Minerals and Energy The Willow Creek talc mine projected to resume production in 1986, is located within this area. Talc potential is very high within portions of this area.

Area Access Guidelines Timber Creek and Warm Springs have access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The North Fork of Greenhorn Creek to Idaho Creek has access via controlled use roads that are closed to motorized access during sensitive times of the year.

Roadless Area Inventory 1-021 contains 25,821 acres. 1-023 contains 171 acres. 1-024 contains 13,623 acres. 1-027 contains 576 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	15,680	5220	8670	25,939	0

GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

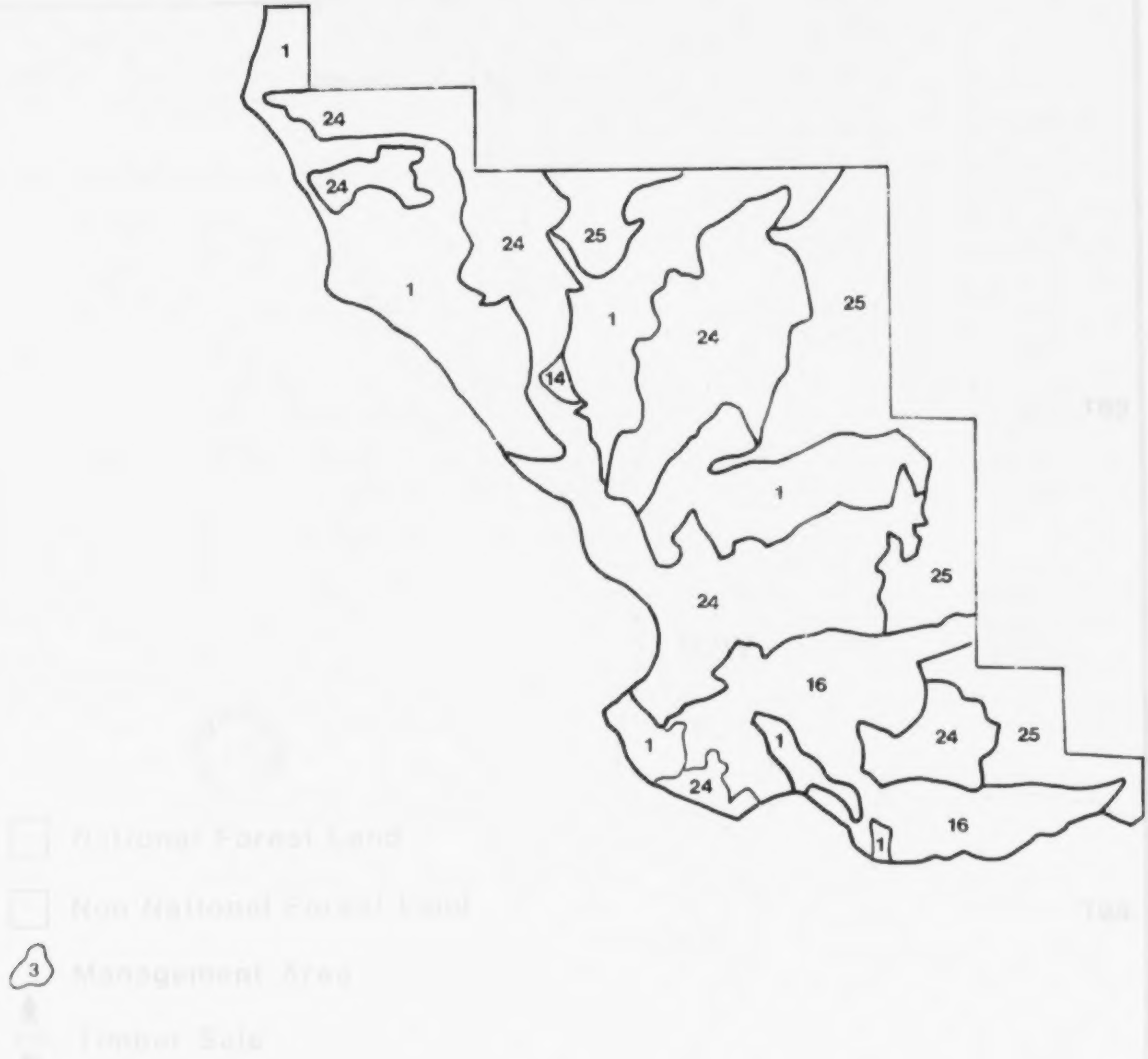
GDA 6A (55,509 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 15,090	MA 11 715	MA 12 - 83	MA 14 - 220	MA 16 - 93
MA 20 - 7031	MA 21 - 2183	MA 24 - 23,410	MA 25 - 5753	MA 27 - 931

GEOGRAPHICAL DISPLAY AREA

GRAVELLY PLANNING UNIT

6B


1
24
24
24
25
1
1
24
25
14
1
25
24
16
1
24
25
1
24
16
1
T7S
T8S
T9S
National Forest Land
Non-National Forest Land
3
Management Area
Timber Sale

GRAVELLY: **GDA-6B**	This GDA is located in the northeast end of the Gravelly Mountain Range.
Vegetative Characteristics	The steep slopes in the southern part of the area and north-facing slopes along the east edge are forested. Principal species are lodgepole pine, Douglas-fir and Engelmann spruce. Large grassland parks with scattered patches and large stands of whitebark pine, subalpine fir and lodgepole pine typify the remainder. Subalpine grassland occurs along the top of the Gravelly Range.
Water	The GDA is an important water producer. The upper reaches of major streams are intermittent.
Wildlife and Fish	Big game species include elk, moose, mule deer, whitetail deer, antelope, black bear, and mountain lion. The area contains excellent big game habitat. Elk and deer winter on windswept ridges and south-facing slopes at lower elevations. Grizzly bears have been observed in this area. Wigwam Creek supports a small population of fish.
Recreation	Recreational use has been mainly Types I, II, and III. Recreation is typically dispersed. Sightseeing and hunting are the major recreational pursuits.
Range	Most of the area is included in intensive grazing management systems. Range improvements such as fences, ponds and spring developments are common.
Transportation System	Access is provided by the Call, Johnny Ridge and Gravelly Range Roads. The interior road and trail system is limited.
Area Access Guidelines	Access via roads and trails open to motorized public access, with no restrictions.
Roadless Area Inventory	1-021 contains 6,294 acres. 1-022 contains 6,830 acres. 1-023 contains 12,769 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	6493	9950	5150	8220	0

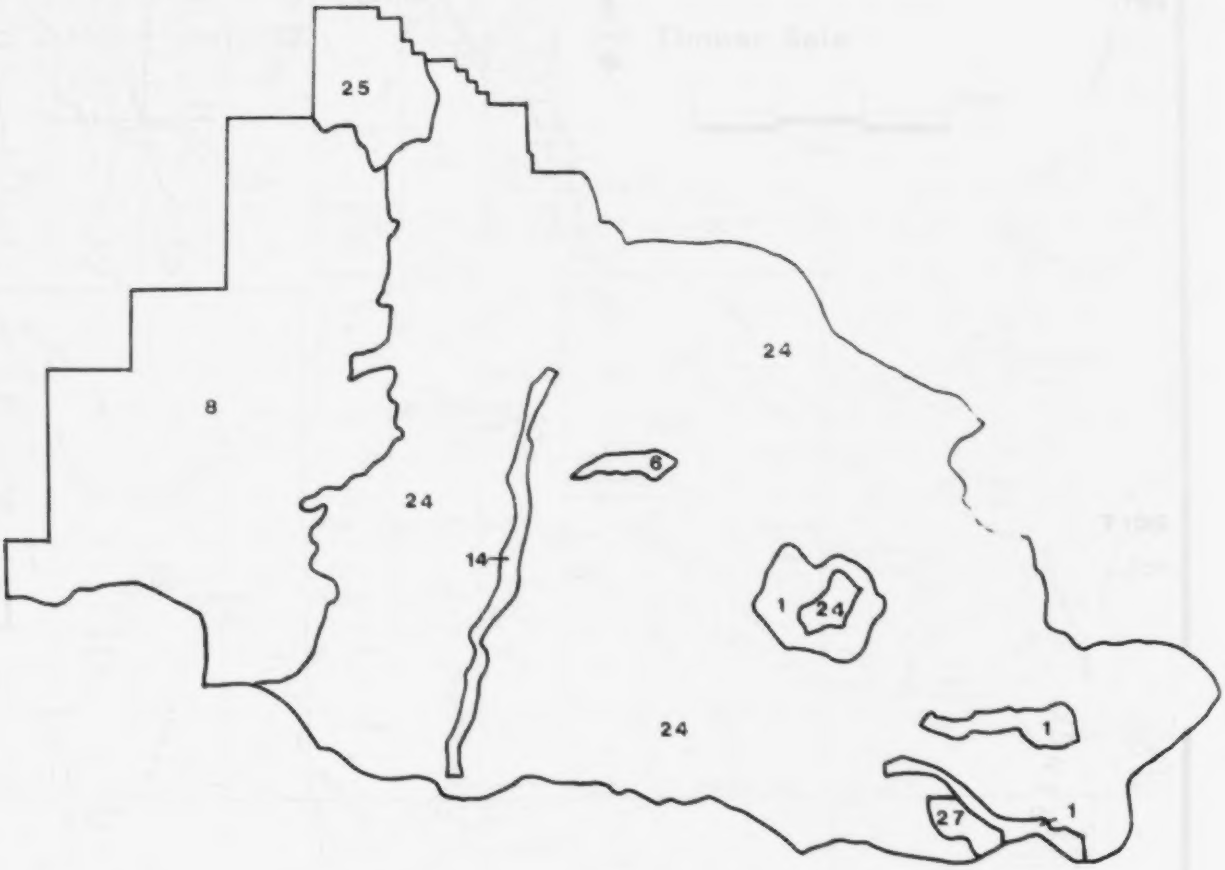
GDA-Management Area Summary	Management Area acrs displayed below include acres in Management Areas 4 and 5.

GDA 6B (29,813 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 8888	MA 3 - 3	MA 11 - 355	MA 14 - 85	MA 16 - 4192
MA 24 - 10,645	MA 25 - 5645			

GRAVELLY PLANNING UNIT

6C


25
24
8
24
6
14
1
24
24
1
27
1

GRAVELLY: **GDA-6C**	This GDA contains a portion of the Snowcrest Range, a portion of the Ruby River bottom, the Cottonwood and associated drainages, a part of their high elevation headwaters, and structural features including Monument Ridge, Strawberry Butte and Black Butte.
Vegetative Characteristics	Vegetation on the lower elevation slopes is grassland and sagebrush-grassland, with patches of Douglas-fir on north-facing slopes. The floodplain of the Ruby River contains many willow bottoms. Limber pine, juniper and Douglas-fir occur on the steep breaks along the river. Mid-elevation slopes are grassland with patches of aspen, Douglas-fir, lodgepole pine and Engelmann spruce. Patches of whitebark pine and subalpine fir grow at the higher elevations. The top of the Gravelly Range is mostly subalpine grasslands.
Water	Natural water turbidity of the drainage on the west side of the Snowcrest Range is low. The Ruby and its tributaries carry a high sediment load.
Wildlife and Fish	Diverse habitat provides ecological niches for most species of birds and mammals common to southwestern Montana. Antelope and sandhill cranes summer in the area. Mountain goats occur in the Snowcrest Range. Big game winter range occurs on the west side of the Snowcrest Range. Grizzly bears have been observed in this area.
Recreation	One developed site is located in the GDA. Present recreation use is mainly hunting.
Range	The majority of the area is within cattle and sheep allotments. All allotments are managed under intensive grazing systems with structural improvements for the management of livestock.
Timber	Past timber harvest has been minor in this GDA.
Transportation System	The main Ruby Road and the Gypsum and Cottonwood Roads in the east side of the area are the only major access routes in the GDA. There are no road accesses, except the Robb Creek and Ledford Roads, to the Forest on the west side of the Snowcrest Range. Primitive roads exist throughout the area and travel is affected by ORV regulations.
Minerals and Energy	A significant amount of oil and gas exploration and mineral exploration has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access (the Ruby Road) available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	1-024 contains 2,835 acres. 1-026 contains 10,025 acres. 1-027 contains 673 acres. 1025A contains 11,040 acres. 1025B contains 9,287 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	25,758	4690	17,530	0	0

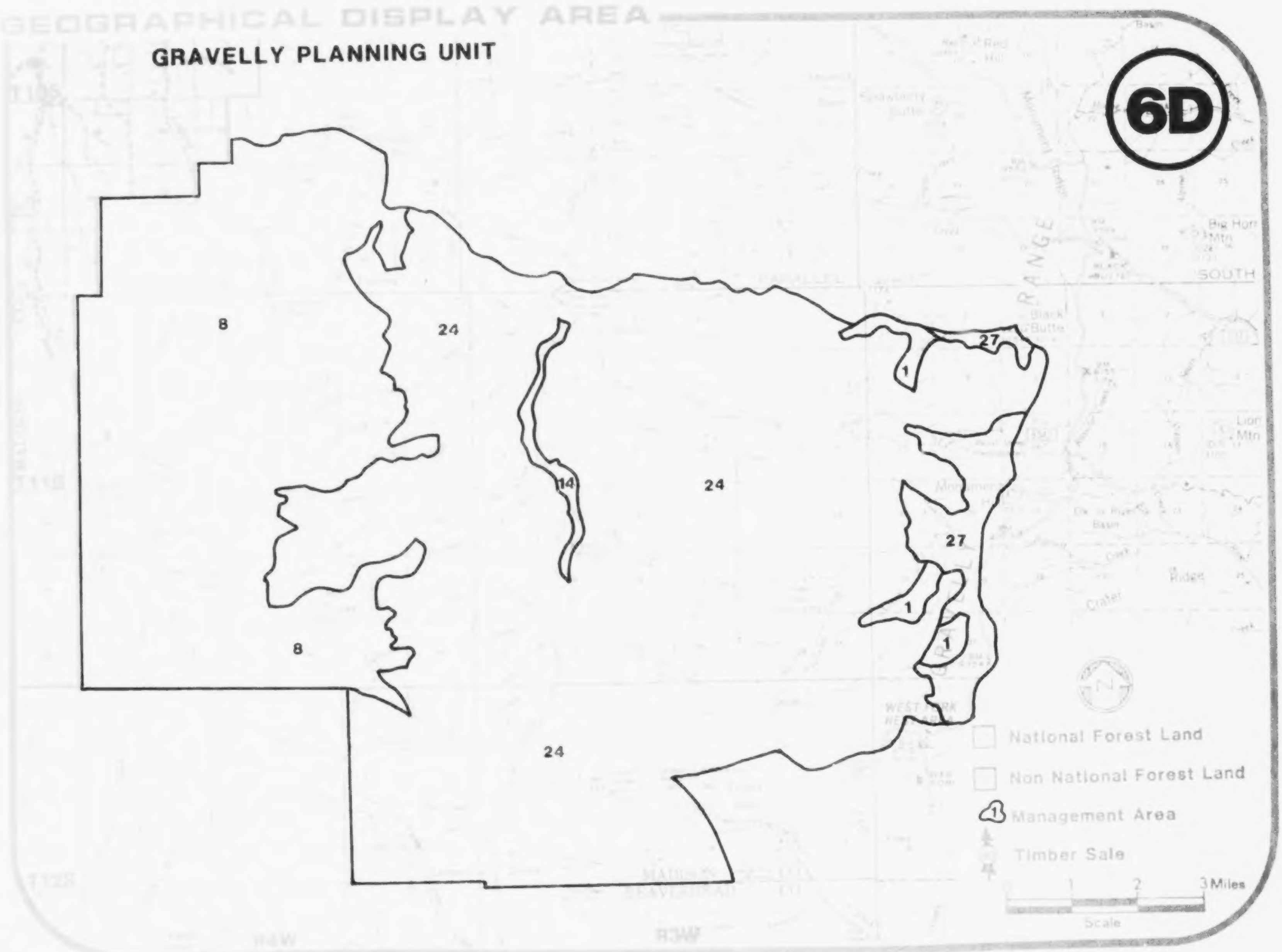
GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 6C (47,978 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 1624	MA 3 - 8	MA 6 - 120	MA 8 - 10,954	MA 11 - 1013
MA 14 - 307	MA 24 - 32,536	MA 25 - 1179	MA 27 - 237	

GEOGRAPHICAL DISPLAY AREA

GRAVELLY PLANNING UNIT


6D
8
24
14
27
1
Red Hill
Strawberry Butte
Monument Ridge
RANGE
Big Horn Mtn
SOUTH
Black Butte
Lion Mtn
Basin
Ridge
Crater
WEST FORK
MADISON
BEAVERHEAD
T10S
T11S
T12S
R4W
R3W
National Forest Land
Non National Forest Land
Management Area
Timber Sale
1
2
3 Miles
Scale

GRAVELLY: GDA-6D	This GDA contains portions of the Snowcrest Range, Ruby River bottom, and west slopes of the Gravelly Range. The major drainages are the east fork of the Blacktail and the east and main forks of the Ruby River.
Vegetative Characteristics	Vegetative cover on lower elevation slopes is grassland and sagebrush-grassland, with scattered patches of Douglas-fir on north-facing slopes. The floodplain of the Ruby River contains willow bottoms. Limber pine, juniper and Douglas-fir occur on the steep breaks along the river. Mid-elevation slopes are grassland with patches of aspen, Douglas-fir, lodgepole pine and Engelmann spruce. Patches of whitebark pine and subalpine fir grow at the higher elevations. The top of the Gravelly Range is mostly subalpine grasslands.
Wildlife and Fish	Diverse habitat provides ecological niches for most species of birds and mammals common to southwestern Montana. Antelope and sandhill cranes summer in the area. Mountain goats occur in the Snowcrest Range. Big game winter range occurs on the west side of the Snowcrest Range. Grizzly bears have been observed in the area.
Recreation	No developed sites are located in this area. Present recreation use is mainly hunting.
Range	The majority of the area is within cattle and sheep allotments. All allotments are managed under intensive grazing systems with structural improvements for the management of livestock.
Timber	Past timber harvest has been minor in this GDA.
Transportation System	The Ruby River and Eureka Basin Roads are the only major access routes in the area. A trail system is located in the Snowcrest Range. Primitive roads are extensive in the area and are managed through the ORV regulations. Except for the primitive road to the Notch, there is no access to the Forest on the west side of the Snowcrest Range.
Minerals and Energy	A significant amount of oil and gas exploration has occurred and is occurring in this area.
Area Access Guidelines	Access via controlled use roads with one primary access (the Ruby road) available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.
Roadless Area Inventory	1-026 contains 26,629 acres. 1-028 contains 2,687 acres. 1025A contains 17,672 acres. 1025B contains 19,643 acres.

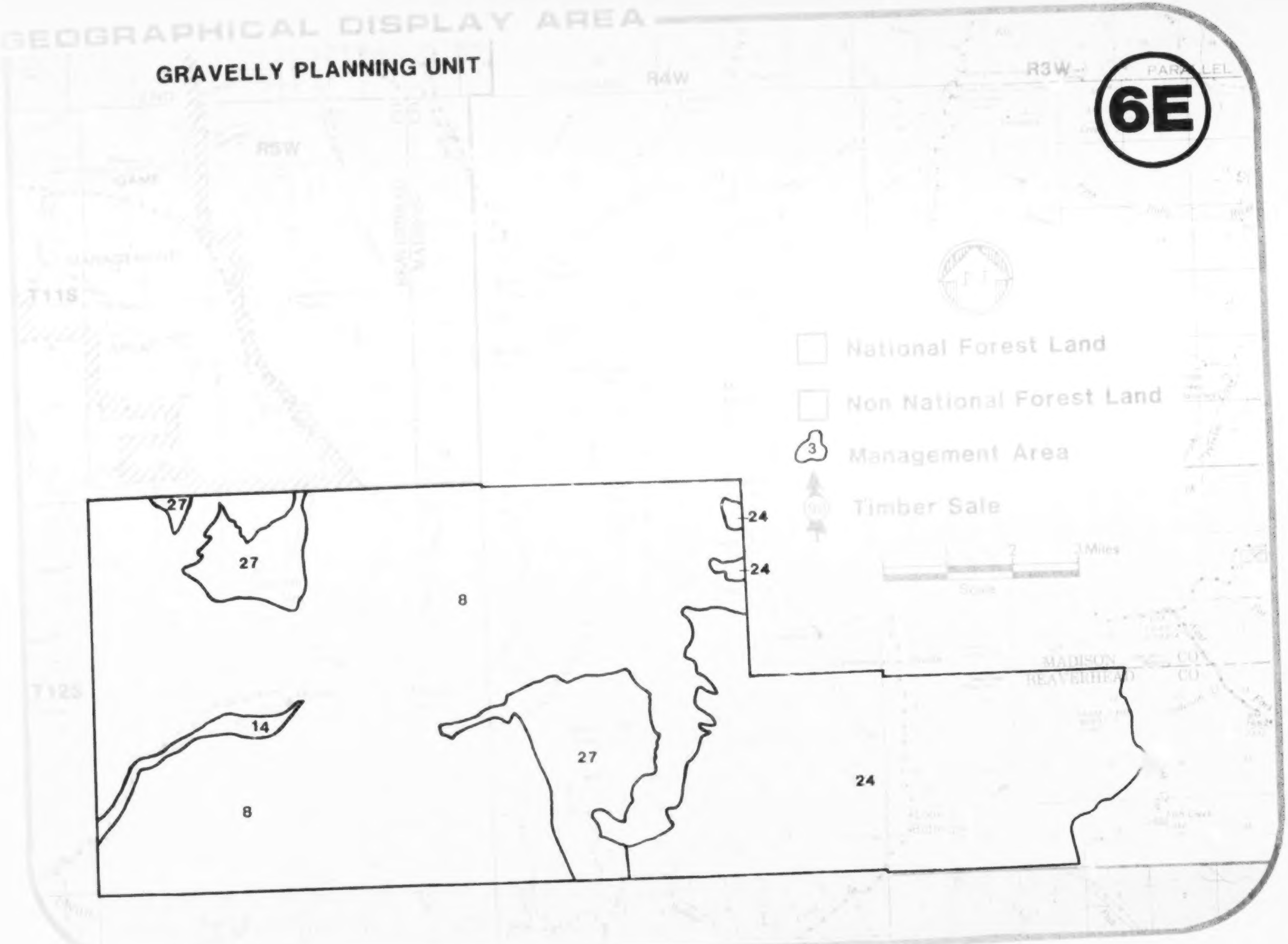
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	46,476	11,230	13,305	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 6D (71,011 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 798	MA 3 - 8	MA 8 - 21,130	MA 11 - 1527	MA 12 - 70
MA 14 - 309	MA 24 - 44,552	MA 27 - 2617		


GEOGRAPHICAL DISPLAY AREA
GRAVELLY PLANNING UNIT
6E
R5W
R4W
R3W
PARALLEL
T11S
T12S
National Forest Land
Non National Forest Land
3 Management Area
Timber Sale
2
3 Miles
Scale
MADISON CO
BEAVERHEAD CO
27
27
8
24
24
14
27
24
8

GRAVELLY: GDA-6E This GDA is located in the southwestern corner of the Gravelly Planning Unit.

Vegetative Characteristics Vegetation in the northeast half of the area on lower elevations consists of grassland and sagebrush-grassland with scattered patches of Douglas-fir. Mid-elevations are forested. Major species are lodgepole pine, Douglas-fir and Engelmann spruce. Whitebark pine and subalpine fir grow at higher elevations in basins and ridges. In the southeastern portion, vegetative cover is sagebrush-grassland.

Water Water turbidity is low to moderate.

Wildlife and Fish Elk calve in the area. The GDA contains a migration route for elk that winter in the Blacktail Game Range. Grizzly bears have been observed in this area. Sandhill cranes nest and summer in the Long Creek Basin. Most of the area streams have fishable populations.

Recreation No developed sites are located in this GDA. Present recreation use is mainly hunting with some summer backpacking and horseback camping in the east fork of the Blacktail.

Range The majority of the area is within cattle and sheep allotments. All allotments are managed under intensive grazing systems with structural improvements for the management of livestock.

Timber Past timber harvest has been minor in this GDA.

Transportation System The Centennial Divide and Antone Roads are the only major access routes in the GDA. A trail system is located in the Snowcrest Range. Primitive roads are extensive in the area, and travel is affected by ORV regulations.

Minerals and Energy A significant amount of oil and gas exploration has occurred and is occurring in this area.

Area Access Guidelines Access via controlled use roads with one primary access available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use. The Ruby road is the primary access.

Roadless Area Inventory 1-028 contains 5,975 acres. 1025A contains 10,309 acres. 1025B contains 29,679 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	27,667	16,330	4660	0	0

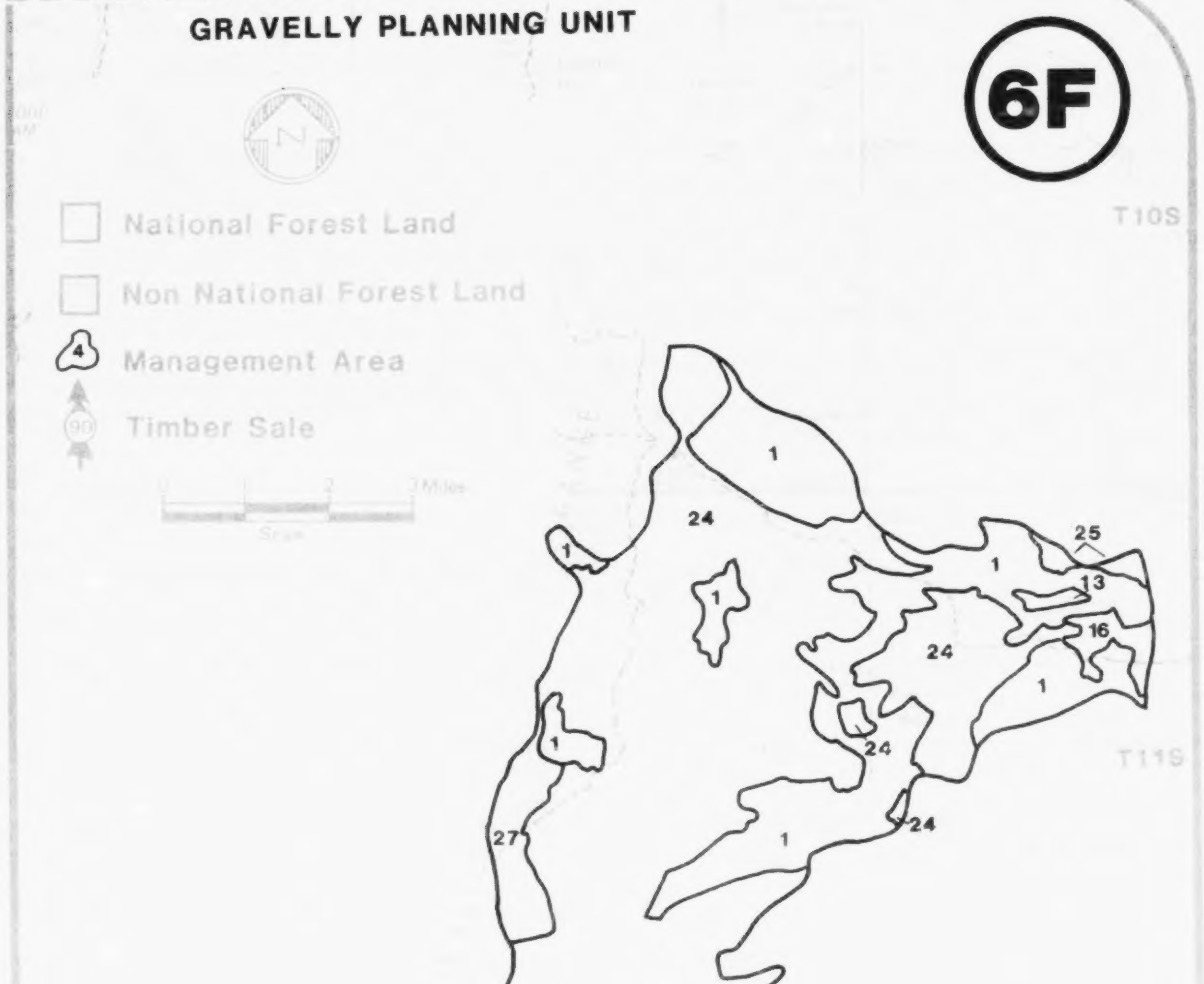
GDA-Management Area Summary Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 6E (48,657 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 8 - 30,023	MA 11 - 855	MA 12 - 132	MA 14 - 357	MA 24 - 13,002
MA 27 - 4288				

GEOGRAPHICAL DISPLAY AREA

GRAVELLY PLANNING UNIT


6F
National Forest Land
Non National Forest Land
4
Management Area
90
Timber Sale
0
1
2
3 Miles
Scale
T10S
T11S
T12S
R3W
R2W
R1W
1
24
25
13
16
27
1
24
1
24
1
24
1
25
1

GRAVELLY: **GDA-6F**	This GDA includes the upper reaches of the West Fork of the Madison River and the south-central portion of the Gravelly Range.
Vegetative Characteristics	Vegetation is grassland or sagebrush-grassland, with about one-third forest. Common species are Douglas-fir, lodgepole pine and Engelmann spruce. Numerous patches of whitebark pine, subalpine fir and some lodgepole pine are scattered throughout the area. Subalpine grassland and alpine vegetation covers the high ridges.
Water	Water turbidity is low in drainages from the north end of the GDA but is higher in the south end. The West Fork of the Madison River carries a high sediment load during periods of high runoff. Fish Creek Lake, in the southwestern corner of the area has been dammed for irrigation purposes.
Wildlife and Fish	The GDA is generally big game summer range; however, durng mild winters some elk winter on the south-facing slopes along Landon Ridge. Most deer leave the area in winter. Grizzly bears have been observed in the area.
Recreation	Recreation use is typically dispersed. Hunting is the chief recreational activity, and snowmobiling is very popular.
Range	All the GDA is included in intensive grazing management systems. Sheep graze the higher elevation ranges, and cattle use the lower range. Range developments are numerous.
Transportation System	Access is provided by the Standard Creek, Gravelly Range, Eureka Basin, and Metzel Creek roads. An adequate trail system serves the area.
Minerals and Energy	A significant amount of oil and gas exploration has occurred and is occurring in this area
Area Access Guidelines	Access via roads and trails open to motorized public access, with no restrictions.
Roadless Area Inventory	1-026 contains 3,133 acres. 1-027 contains 3,053 acres. 1-028 contains 5,476 acres. 1029A contains 32,456 acres.

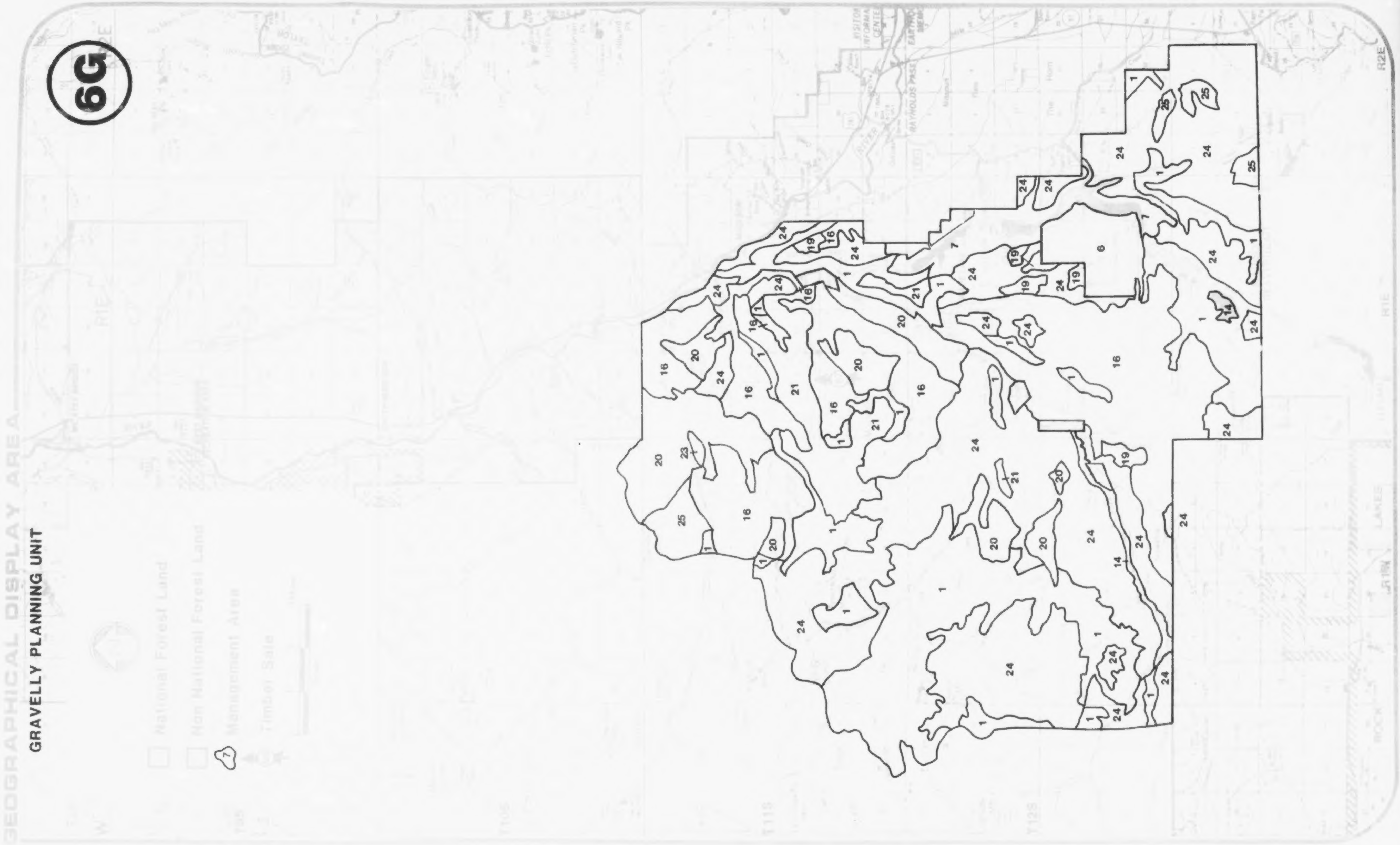
Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	24,296	8606	16,183	1553	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 6F (50,638 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 11,533	MA 11 - 889	MA 12 - 57	MA 13 - 69	MA 16 - 397
MA 24 - 36,609	MA 25 - 376	MA 27 - 708		


6G
GEOGRAPHICAL DISPLAY AREA
GRAVELLY PLANNING UNIT
National Forest Land
Non National Forest Land
Management Area
Timber Sale
R1E
R2E
T9S
T10S
T11S
T12S
REYNOLDS PASS
1
6
7
14
16
19
20
21
23
24
25

GRAVELLY:
GDA-6G

This GDA is located on the south end of the Gravelly Range and includes the lower West Fork of the Madison River.

Vegetative Characteristics

Vegetation in the northwestern part of the unit is predominantly forest with lodgepole pine, Douglas-fir, Engelmann spruce and subalpine fir being the major species. In the southwestern portion, vegetation is about two-thirds grassland, sagebrush-grassland, and one-third forest. Large blocks of forest cover the south-central area, and along the lower, north-facing slopes of Elk River. Lodgepole pine, Douglas-fir and Engelmann spruce are the common species. Numerous small patches of whitebark pine and subalpine fir are scattered throughout. Subalpine grassland occurs on the higher elevation ridges and basins. In the eastern portion of the GDA, vegetative cover on the broad benches in about half grassland parks and half forested. Lodgepole pine and Douglas-fir are the major forest species. Grassland and sagebrush-grassland dominates on mid-elevation north slopes with scattered patches and open stands of aspen and Douglas-fir.

Water

The West Fork of the Madison River carries a high sediment load during periods of high runoff. The chain of lakes—Smith, Wade, Cliff, Goose, Otter and Hidden—are found in this area.

Wildlife and Fish

The GDA is primarily big game summer range. In mild winters elk may winter on the south-facing slopes along the West Fork of the Madison River and on Horn Mountain. Grizzly bears have been observed in the area. Bald eagles nest in the GDA. The West Fork, Elk River and all of the lakes provide good fisheries.

Recreation

Recreation use is heavy. The area offers both developed and dispersed use. There are two small resorts available to serve the public. Snowmobiling is very popular in this GDA.

Range

Most of the GDA is included in intensive grazing management systems. Range improvements, such as fences and water developments, are common.

Timber

Significant amounts of timber have been harvested in this GDA since the mid-1960's. Recent harvest activity has resulted from the mountain pine beetle infestation.

Transportation System

Access to and within this GDA is very good. A network of roads and trails serve the area.

Area Access Guidelines

Access via controlled use roads with one primary access (West Fork Madison road) available for motorized public use even during the sensitive period when all or most axillary roads are closed to motorized use.

Roadless Area Inventory

1-027 contains 1,282 acres. 1029A contains 33,330 acres.
1029B contains 16,809 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	15,659	19,594	2500	51,988	0

GDA-Management Area Summary

Management Area acres displayed below include acres in Management Areas 4 and 5.

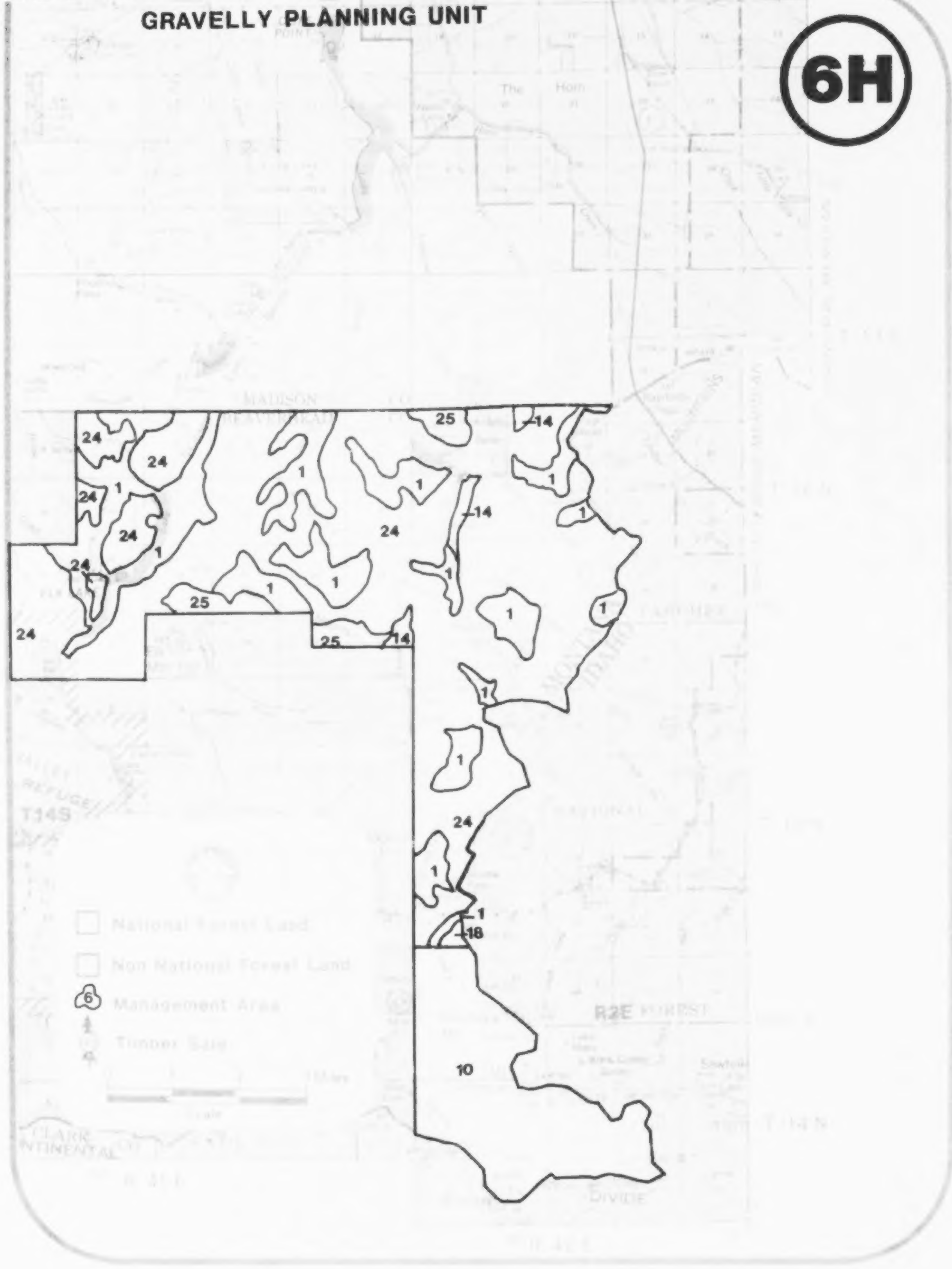
GDA 6G (89,741 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 17,915	MA 3 - 6	MA 6 - 2045	MA 7 - 2391	MA 11 - 1271
MA 12 - 258	MA 14 - 425	MA 16 - 20,037	MA 19 - 804	MA 20 7454
MA 21 - 3921	MA 23 - 95	MA 24 - 31,644	MA 25 - 1475	

GEOGRAPHICAL DISPLAY AREA

GRAVELLY PLANNING UNIT

6H


The
Horn
MADISON
BEAVERHEAD
25
14
24
1
24
24
1
24
1
24
1
24
1
1
1
14
1
1
1
25
1
25
14
24
1
1
1
MONTANA
IDAHO
1
24
1
1
18
10
REFUGE
T14S
R2E
FOREST
NATIONAL
CLARK
CONTINENTAL
Divide
National Forest Land
Non National Forest Land
6
Management Area
Timber Sale
Miles

GRAVELLY: GDA-6H

This GDA includes the Elk Lake area, Antelope Basin and the Mount Jefferson area.

Vegetative Characteristics

Vegetative cover in the GDA is predominantly grassland-sagebrush. There are scattered areas of forest which are mostly lodgepole pine or Douglas-fir stands. There are also scattered patches of aspen and open Douglas-fir.

Wildlife and Fish

Big game species include elk, moose, mule deer, antelope, black bear, and mountain lion. Grizzly bear have been observed in the area. Bald eagles nest in the GDA. This GDA provides mostly summer range. However, a few elk occasionally winter on Horn Mountain, Elk Mountain and in the vicinity of Elk Lake. Elk Lake supports a good fishery including the arctic grayling.

Recreation

Recreation use is dispersed except for the small resort at Elk Lake. Antelope Basin is a popular snowmobiling area.

Range

All of the area north of Red Rock Pass is included in intensive grazing management systems. The GDA is blanketed with range developments.

Timber

There are small patches of timber within the area.

Transportation System

Road access to and within the area is good.

Area Access Guidelines

The Mount Jefferson area has no developed facilities (roads or trails maintained for public access. The remainder of the area has access via roads and trails open to motorized public access, with no restrictions.

Roadless Area Inventory

1-962 contains 4,474 acres. 1029B contains 12,495 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	4160	17,280	3700	870	0

GDA-Management Area Summary

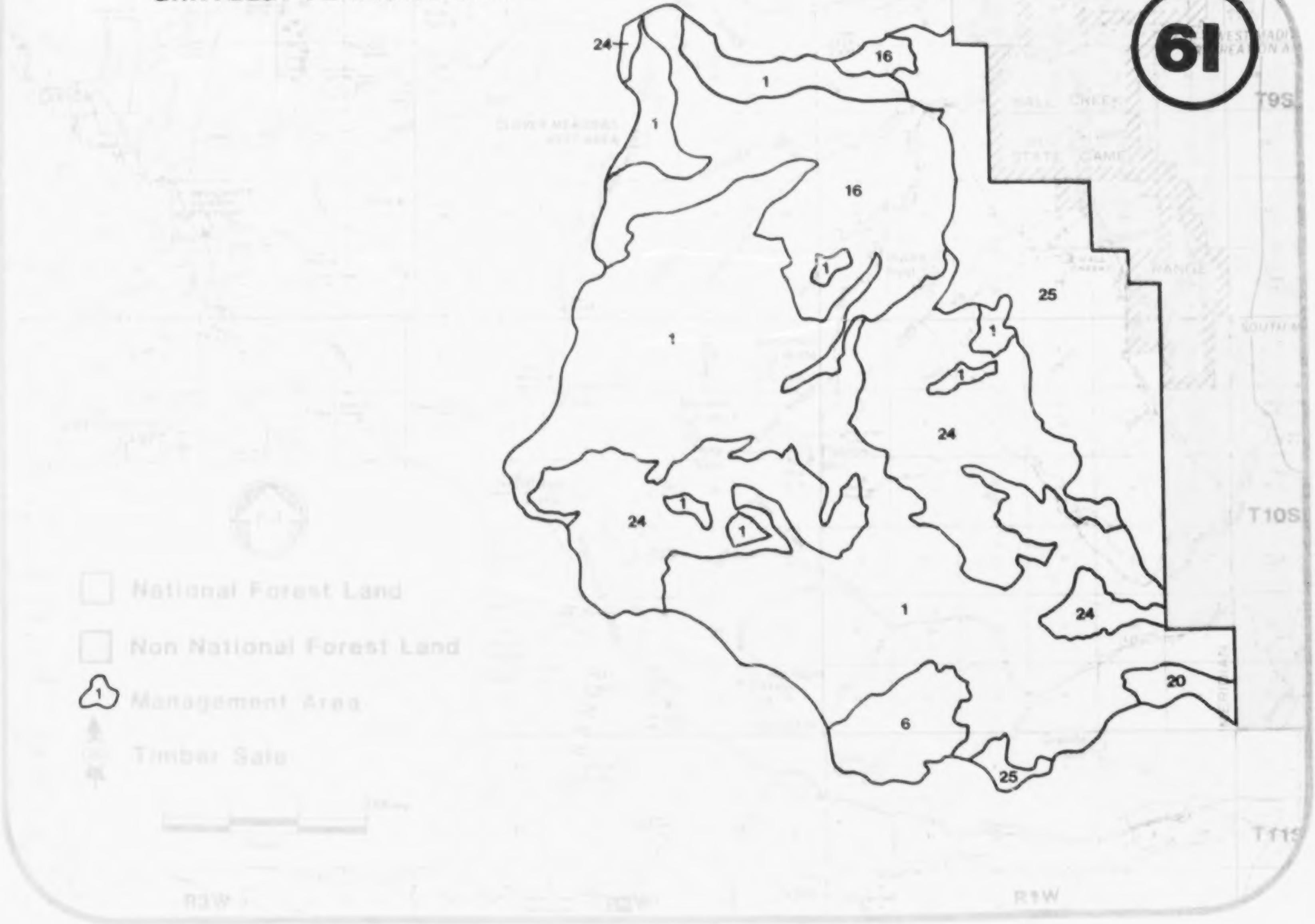
Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 6H (26,010 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 4976	MA 3 - 4	MA 10 - 4474	MA 11 - 336	MA 14 - 245
MA 18 - 107	MA 24 - 15,353	MA 25 - 515		

GEOGRAPHICAL DISPLAY AREA

GRAVELLY PLANNING UNIT


61
24
1
16
1
16
1
25
1
1
24
1
24
1
1
24
1
20
6
25
T9S
T10S
T11S
R3W
R2W
R1W
WALL CREEK
STATE GAME
RANGE
MERIDIAN
National Forest Land
Non National Forest Land
Management Area
Timber Sale

GRAVELLY: GDA-6I

This GDA is located on the east side of the Gravelly Range between Standard Creek and Johnny Ridge.

Vegetative Characteristics

In the northern part of the area, the steep slopes and north-facing slopes along the east edge are forested. Principal species are lodgepole pine, Douglas-fir and Engelmann spruce. The remainder of this part contains rocky uplands, grassland parks, patches and some larger stands of whitebark pine, subalpine fir and logepole pine. The southern part of the area contains grassland and sagebrush-grassland, lodgepole pine, Douglas-fir, Engelmann spruce and subalpine fir forest, rocky uplands, and high elevation grassland parks and meadow. North of Horse Creek, and on the east side of the area the vegetation is predominantly forest with scattered grassland parks and meadow. The area farther west is characterized by meadows, grassy parks and scattered patches of whitebark pine and subalpine fir. Subalpine grassland and alpine vegetation covers the high ridges.

Water

The area is an important water producer and water turbidity is low, except Ruby Creek, which carries a high sediment load during spring runoff.

Wildlife Fish

Big game species include elk, moose, mule deer, antelope, black bear, and mountain and lion. Grizzly bears have been observed in the area. This GDA contains the Forest's portion of the Wall Creek Winter Game Range. Deer and elk winter here and on the adjacent State and private lands.

Recreation

Recreation is typically a dispersed type. Hunting is the chief attraction.

Range

Most of the area is included in intensive grazing management systems. Livestock use is coordinated with elk use on the Wall Creek Game Range.

Timber

Some timber harvesting has occurred in this GDA. Recent harvesting activity has resulted from the mountain pine beetle infestation.

Transportation System

Access to the area is limited to the county road leading to the Wall Creek Ranger Station. The Johny Ridge road on the north end and the Ruby Creek road near the north end exist in this GDA. A good trail system serves the interior of the GDA.

Area Access Guidelines

The Horse Creek area has access by trails or historically developed jeep roads. The rest of the area has access via controlled use roads that are closed to motorized access during sensitive times of the year.

Roadless Area Inventory

1-027 contains 44,806 acres. 1029A contains 8 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	0	22,194	11,676	2588	12,619	0

GDA-Management Area Summary

Management Area acres displayed below include acres in Mangement Areas 3, 11 and 12.

GDA 6I (49,077 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 21,846	MA 6 - 1636	MA 11 - 663	MA 12 - 2	MA 16 - 6697
MA 20 - 781	MA 24 - 9812	MA 25 - ,640		

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GEOGRAPHICAL DISPLAY AREA

VICINITY MAP

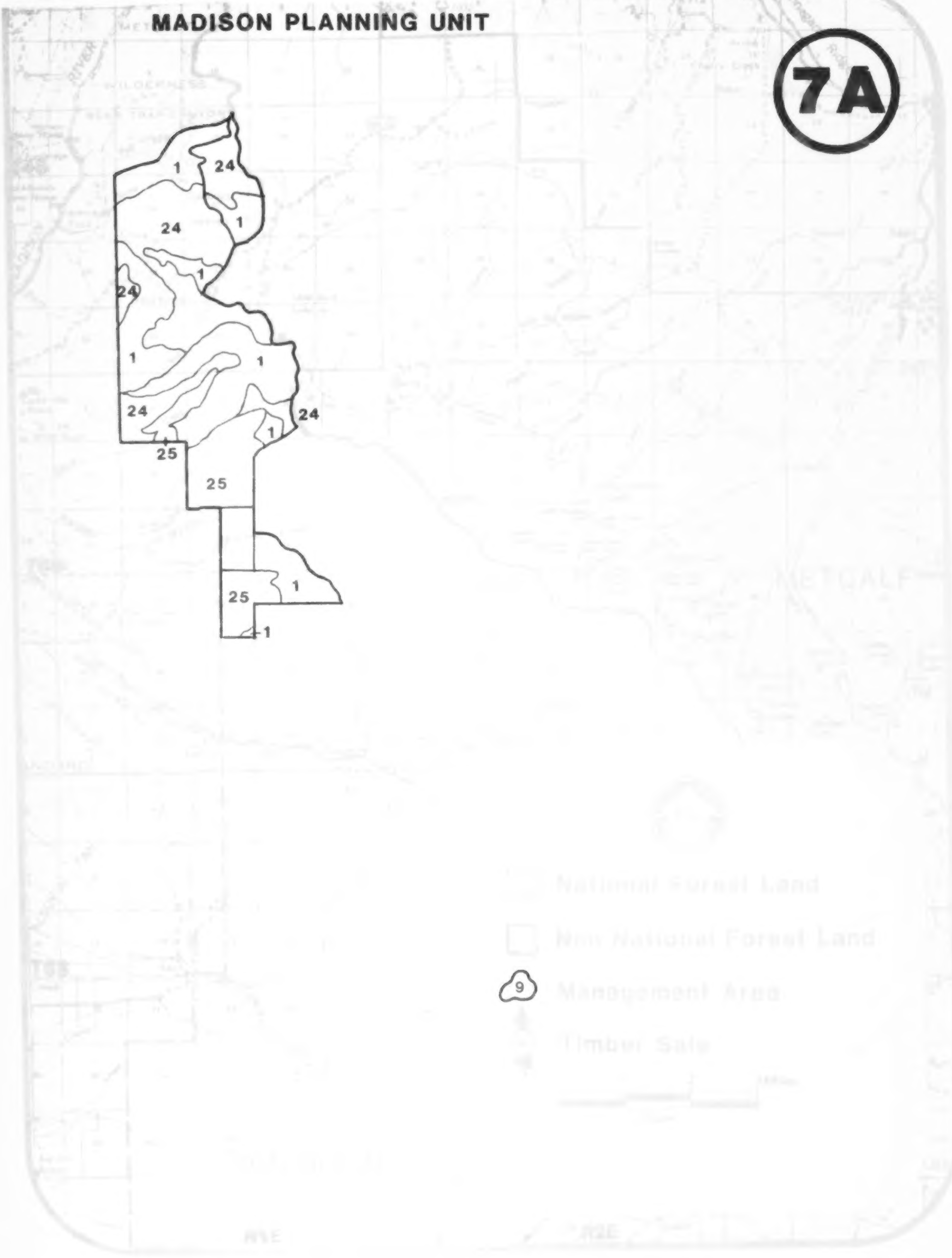
7A
7B
7C
7D
KEY MAP

BEAVERHEAD
National Forest
[illegible]

MADISON PLANNING UNIT

GEOGRAPHICAL DISPLAY AREA

MADISON PLANNING UNIT


7A
1
24
24
1
1
24
1
1
24
24
1
25
25
1
25
1
WILDERNESS
METCALF
T6S
T9S
R6E
R8E
National Forest Land
Non National Forest Land
9
Management Area
Timber Sale

MADISON: GDA-7A	This GDA is comprised of the north end of the Madison Range.
Vegetative Characteristics	Vegetative cover on south-facing slopes is grassland with a heavy invasion of Douglas-fir. North-facing slopes are forested, with lodgepole pine the dominant species. Some Englemann spruce occurs along the stream bottoms. Open stands of whitebark pine and subalpine grassland occur on the high elevation ridges.
Water	Streams are all relatively small with steep gradients. This area is one of the drier areas in the Madison Valley. It is not an important water producer, although water produced does contribute to downstream uses.
Wildlife and Fish	Big game species include elk, moose, mule deer, whitetail deer, bighorn sheep, black bear, and mountain lion. Bighorn sheep occasionally enter the GDA from the Spanish Peaks area. Grizzly bears have been observed in the area. The area provides yearlong range for both deer and elk. Fall Creek and Jourdain Creeks have small populations of trout.
Recreation	Recreation use is dispersed. Big game hunting is the chief form of recreation.
Range	Almost all of the GDA is grazed by livestock under extensive management systems. Range developments are limited to a few miles of fence.
Transportation System	The GDA has no road or trail access. A trail system serves the interior of the area.
Area Access Guidelines	Access by trails or historically developed jeep roads.
Roadless Area Inventory	J1549 contains 7,315 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	51	7414	179	136	0	0

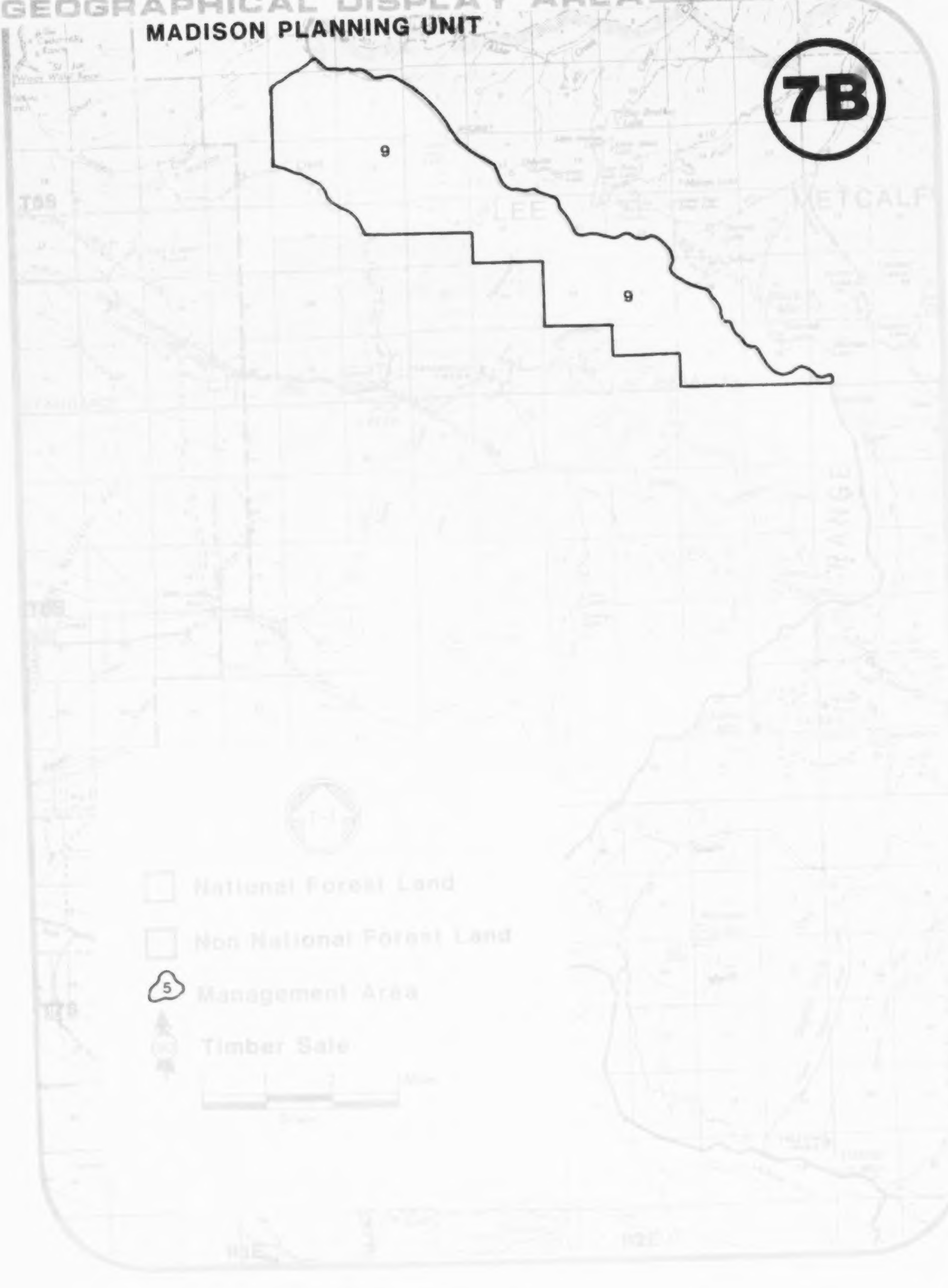
GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 3, 11, and 12.

GDA 7A (7,780 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 3419	MA 11 - 177	MA 12 - 10	MA 24 - 2669	MA 25 - 1505

GEOGRAPHICAL DISPLAY AREA

MADISON PLANNING UNIT


7B
9
9
T59
LEE
METCALF
T69
T79
RANGE
National Forest Land
Non National Forest Land
5
Management Area
Timber Sale

MADISON:
GDA-7B

This GDA is part of the Lee Metcalf Wilderness Area.

Vegetative Characteristics

Vegetative cover is mostly alpine meadows and open stands of whitebark pine. Below timberline, which is about 9,200 feet, vegetative cover is mostly forest, but some grassland parks and meadows occur. Principal tree species are lodgepole pine, Douglas-fir and Englemann spruce.

Water

The GDA is an important water producer due to its high precipitation input and relatively low vegetative cover. Most of the runoff enters Jack Creek. Much of the water from the Jack Creek drainage is used locally in the Madison Valley.

Wildlife and Fish

Big game species include elk, moose, mule deer, whitetail deer, bighorn sheep, antelope, black bear, mountain lion, and mountain goat. Grizzly bear have been observed in the GDA. Mountain goat inhabit this high crest. Occasionally bighorn sheep move into the area from the Spanish Peaks.

Recreation

Only dispersed recreation occurs in this area.

Transportation System

System trails adequately serve the area.

Area Access Guidelines

Access via trails or historically developed jeep roads.

Roadless Area Inventory

J1549 contains 7,636 acres.

Recreation Opportunity Spectrum (Future Condition)

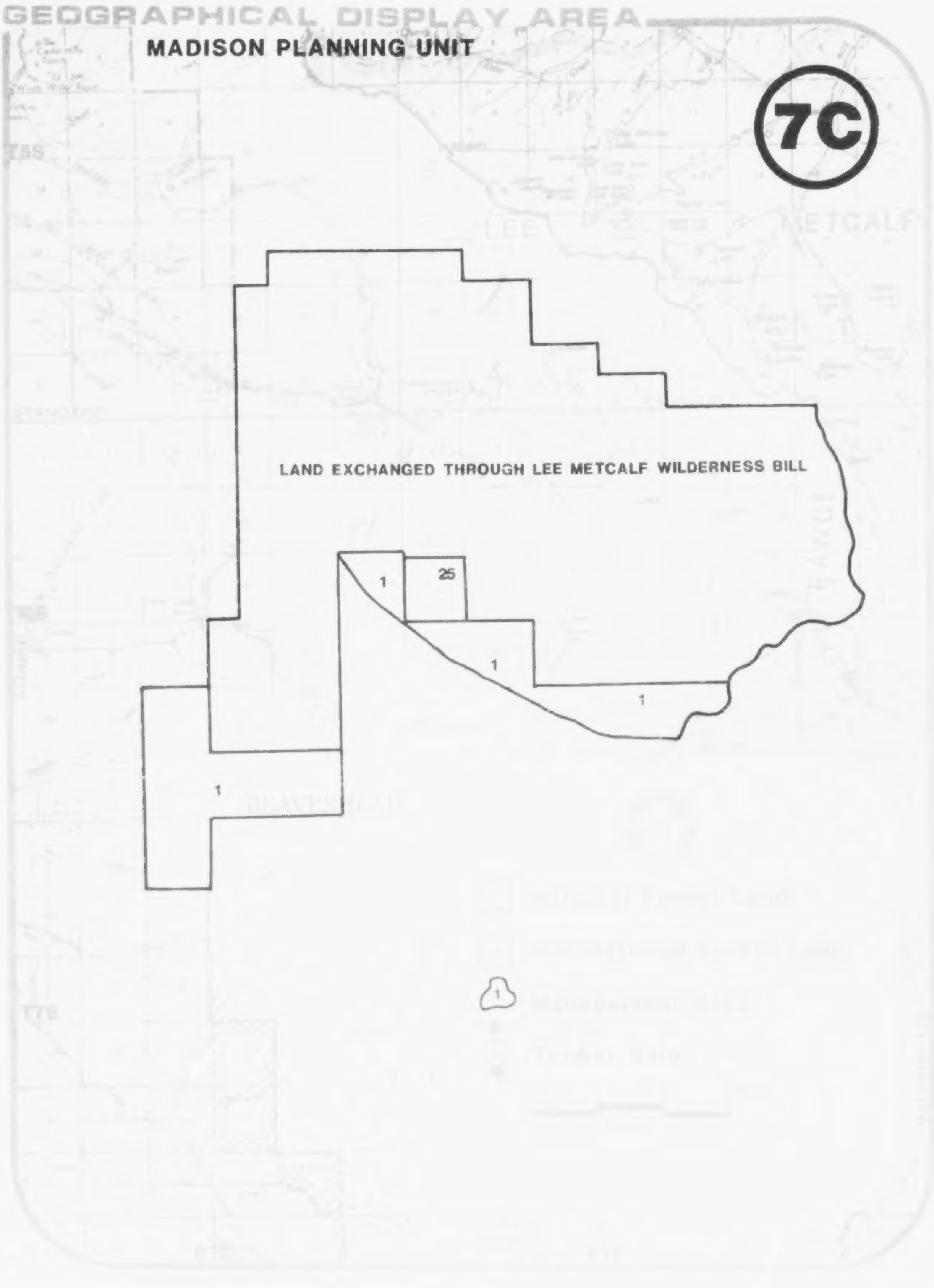
	P	SPNM	SPM	RN	RM	R
Acres -	2565	4037	746	288	0	0

GDA-Management Area Summary

Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 7B (7,636 Acres)
MA - Acres MA - Acres MA - Acres

MA 9 - 7636


GEOGRAPHICAL DISPLAY AREA
MADISON PLANNING UNIT
7C
LEE METCALF
LAND EXCHANGED THROUGH LEE METCALF WILDERNESS BILL
1
25
1
1
1
BEAVERHEAD
STANDARD
National Forest Land
Non-National Forest Land
Management Area
Timber Sale

MADISON: GDA-7C	This GDA comprises the National Forest land on the south side of the Jack Creek drainage which is not included in the Lee Metcalf Drainage.
Vegetative Characteristics	Vegetative cover is dominantly forest. Principal tree species are lodgepole pine, Douglas-fir and Engelmann spruce. Timberline is about 9,200 feet.
Water	The GDA is an important water producer.
Wildlife and Fish	Big game species include elk, moose, mule deer, whitetail deer, antelope, black bear mountain lion, and mountain goat. Grizzly bear have been observed in the area.
Recreation	The area provides some dispersed recreation opportunities. This is the northern gateway to the Lee Metcalf Wilderness.
Range	The GDA contains a very small amount of range at the head of Aspen Creek.
Timber	The area contains no suitable timber.
Transportation System	Two trails serve the area.
Area Access Guidelines	Access via trails or historically developed jeep trails.
Roadless Area Inventory	J1549 contains 6,939 acres. N1549 contains 91 acres.

Recreation Opportunity Spectrum (Future Condition)

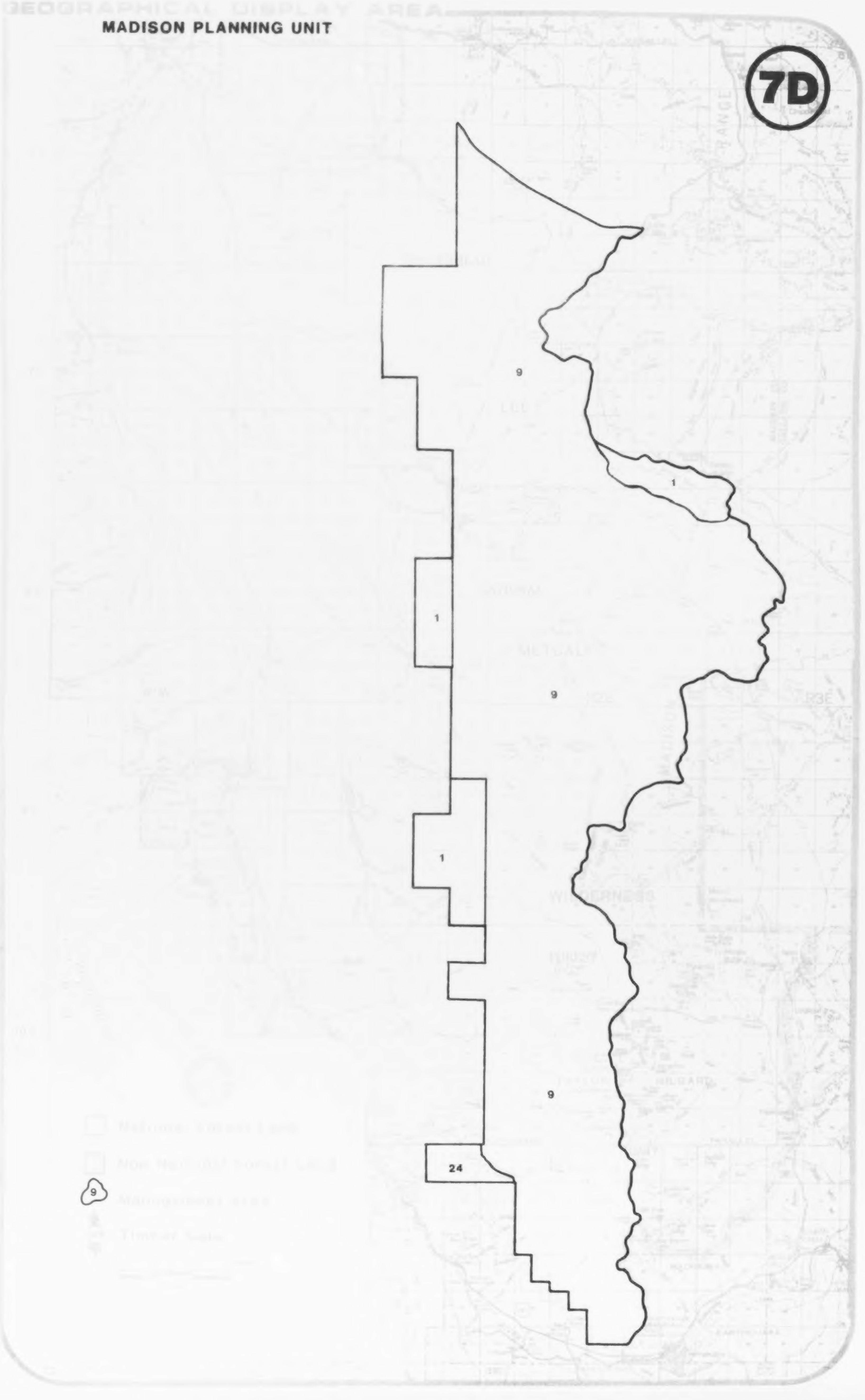
	P	SPNM	SPM	RN	RM	R
Acres -	86	6179	603	0	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 7C (7,030 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 6407	MA 11 - 135	MA 12 - 54	MA 25 - 434

MADISON PLANNING UNIT


GEOGRAPHICAL DISPLAY AREA
7D
RANGE
9
1
9
1
1
9
24
MADISON
WILDERNESS
NATIONAL
23E
National Forest Land
Non National Forest Land
9
Management Area
Timber Sale

MADISON: GDA-7D	This GDA is comprised of the west side of the Madison Range from Fan Mountain on the north to Quake Lake on the south.
Vegetative Characteristics	In the northern two-thirds of the GDA, vegetative cover is predominantly forest with many scattered parks, meadows, and grasslands. Dominant tree species are lodgepole pine, Douglas-fir and Engelmann spruce. Whitebark pine is common at higher elevations. Above 9,000 feet, the approximate timberline, there is little cover, except for patches of alpine vegetation. In the southern third, vegetative cover is sparse on the steep, rocky slopes that comprise most of the area. Grassland and small stands of Douglas-fir occur along the Forest boundary. Lower elevation, north-facing valley sideslopes are forested, with lodgepole pine the main species. Whitebark pine and subalpine fir occur in open stands and small patches on the higher elevation slopes.
Water	This GDA is an important water producer. Much of the water is used locally in the Madison Valley. Water quality is good. Water developments on the Forest include irrigation ditches, several headgates and the Cedar Lake Dam and headworks.
Wildlife and Fish	The area provide excellent big game habitat. Key winter range is found at the lower elevations along the west boundary. The lower slopes of Mill and Bear Creeks are key elk ranges used in conjunction with the State Bear Creek Game Range. Bighorn sheep winter on lower Moose, Squaw and Deadman Creeks. Mountain goats winter throughout the aea. The grizzly bear is frequently observed in the GDA. The larger streams and lakes support fish.
Recreation	All recreation is dispersed. Hunting is presently the chief recreation activity. With the exception of Papoose Bench the entire GDA is included in the Lee Metcalf Wilderness.
Range	Most of the suitable range within the area is included in livestock grazing allotments. These allotments are managed under either intensive or extensive management systems. Most of the allotments have some developments such as fences and spring developments.
Timber	The GDA contains a substantial amount of forested area. The mountain pine beetle is in the epidemic stage throughout all the lodgepole pine stands.
Transportation System	Access to the GDA is very poor. Presently, on the west side, the only access is at Mill Creek ,Bear Creek and Pappose Creek. There is a fairly good trail system within the area.
Area Access Guidelines	Access via trails or historically developed jeep roads.
Roadless Area Inventory	J1549 contains 524 acres. N1549 contains 54,263 acres. S1549 contains 41,333 acres.

Recreation Opportunity Spectrum (Future Condition)

	P	SPNM	SPM	RN	RM	R
Acres -	64,046	32,799	3168	979	0	0

GDA-Management Area Summary	Management Area acres displayed below include acres in Management Areas 4 and 5.

GDA 7D (100,992 Acres)

MA - Acres	MA - Acres	MA - Acres	MA - Acres	MA - Acres
MA 1 - 5948	MA 3 - 1	MA 9 - 93,793	MA 11 - 114	MA 12 - 53
MA 24 - 1083				

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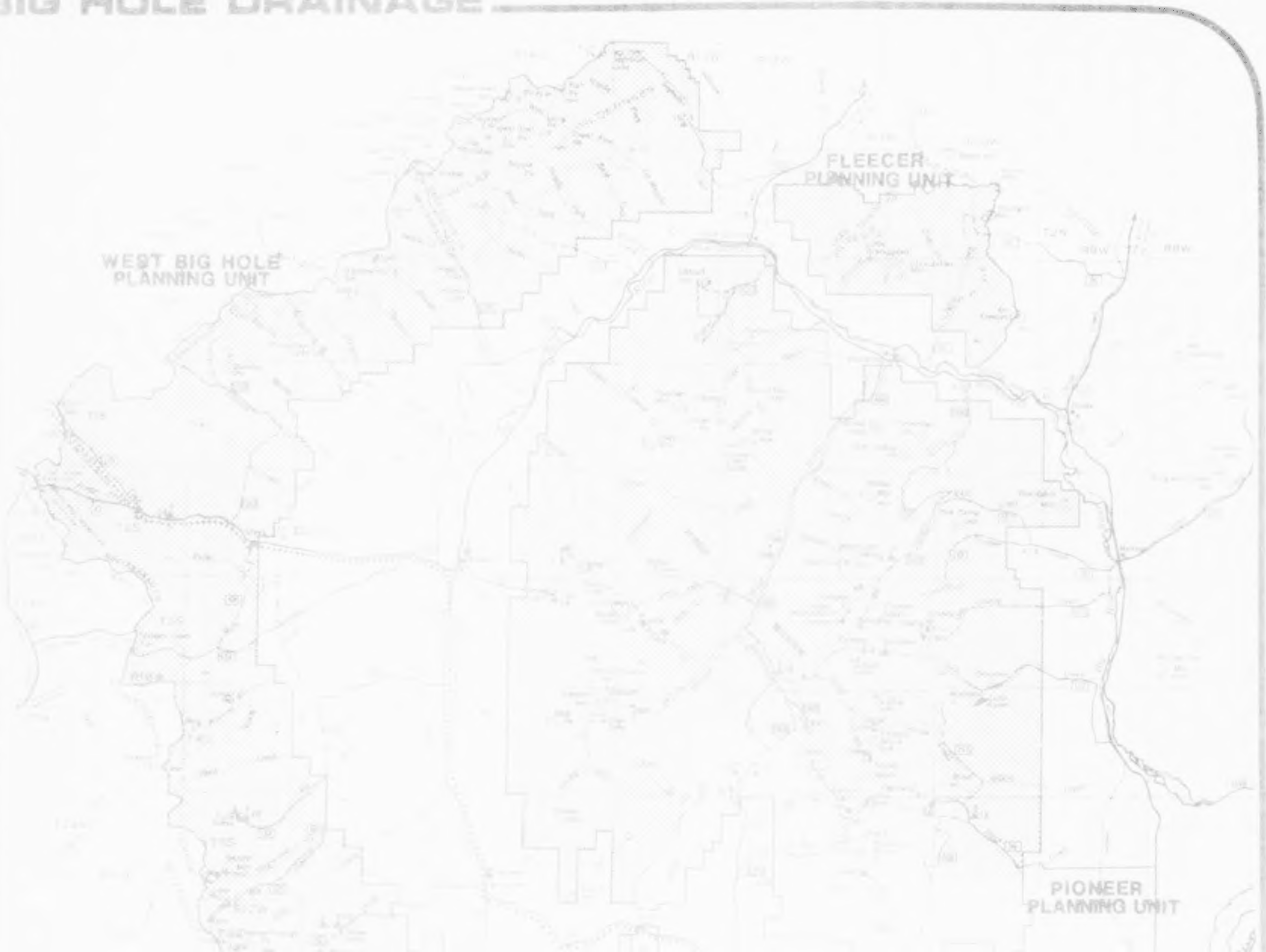
CHAPTER V

BIG HOLE DRAINAGE


WEST BIG HOLE PLANNING UNIT
FLEECER PLANNING UNIT
PIONEER PLANNING UNIT
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PLANNING UNIT
FOREST SERVICE LANDS
WITHIN THE BIG HOLE
RIVER DRAINAGE
BEAVERHEAD
National Forest

V. The Big Hole Drainage

Introduction

This Chapter has been developed to present a more cohesive picture of National Forest management in the Big Hole drainage under this Forest Plan. The information presented in this section is available in other parts of the Forest Plan; direction herein summarizes the general intent of Forest-wide standards, Management Area direction, and monitoring requirements. It is redisplayed here, for the Big Hole drainage specifically, because of the high level of public interest in the area and because in its entirety the Big Hole River encompasses portions of three Ranger Districts and three distinct blocks of National Forest lands (the Pioneers, the Fleecer area, and the south, west and north Big Hole).

The Big Hole River attracts national, regional, and local interest for several reasons. The River is classified by the Montana Department of Fish, Wildlife, and Parks as a Blue Ribbon Trout Stream and is an outstanding fishery, providing very productive habitat for several trout species. Stream dwelling grayling, classified by the State of Montana as a species of special concern, also reside in the River. Each year many visitors float and/or fish the Big Hole, with numerous river outfitters and guides dependent on this recreational activity for their summer income. In addition, the Big Hole and its tributaries are a significant source of irrigation water for ranching operations. Finally, the Big Hole River serves as a municipal watershed for Butte, Montana.

The lands that drain into the Big Hole River also attract public interest. The National Forest lands lie generally in the upper reaches of the tributaries to the Big Hole River, with Bureau of Land Management and State of Montana lands at lower elevations and private holdings in the valley bottom. National Forest lands support a large and diverse population of wildlife and provide significant recreation and permitted domestic livestock grazing opportunities. Timber has been and continues to be harvested from lands determined to be suitable for timber management. The tree resource is also used locally for posts and poles and firewood. Mineral resource exploration and development has played a significant historical role and continues to provide direct and indirect income to local communities. Much of the National Forest land in the Big Hole drainage was inventoried as "roadless", having wilderness characteristics that attract the interest of wilderness advocates.

The Big Hole Valley is a portion of the area drained by the Big Hole River. It is characterized by high elevation, isolation, and remoteness; factors which in combination contributed to a relatively stable, unchanging human environment. Change, including that projected by the Forest Plan, has been looked upon with concern by the area's recreationists and local residents who would rather see the area remain as is.

Description of the Big Hole Drainage

The Big Hole drainage comprises approximately 989,700 acres of National Forest land and includes all of the West Big Hole Planning Unit north and west of the Big Hole Divide, all of the Pioneer Planning Unit except the Rattlesnake and

Grasshopper Creeks drainages, and all of the Beaverhead National Forest portion of the Fleecer Planning Unit.

The Big Hole River originates near the Continental Divide at Darkhorse and Cowbone Lakes and flows east and north, crossing the Forest boundary into the Big Hole Valley. The River continues its winding trip north through the Big Hole Valley, east through the communities of Wise River and Divide, south along the eastern edge of the East Pioneers, and then east again until it eventually joins the Beaverhead and Ruby Rivers near Twin Bridges to become the Jefferson River. As the Big Hole River makes its nearly circular journey through Southwestern Montana, it is joined by many tributaries flowing from National Forest lands.

Elevations in the Big Hole drainage vary west to east from approximately 10,300 feet along the Continental Divide to 6000 feet along the Valley floor to over 11,100 feet atop Tweedy Mountain in the East Pioneers. Average annual precipitation varies from 20 to 50 inches in the high mountains to approximately 10 inches per year in the lower elevations. Much of the precipitation falls as snow during the winter months, and early fall and late spring snowstorms are common, particularly in the mid and higher elevations. On National Forest lands the growing season is short, and there are few frost-free days.

Major Resources and Resource Uses

The following table displays information about some of the major resources and resource potentials in the National Forest portion of the Big Hole drainage:

Table V-1 Major resources and resource potentials of the Big Hole drainage

CATEGORY	UNIT	VALUE	CATEGORY	UNIT	VALUE
Gross Acres (Total)	Acres	1,008,979			
Net Acres (National Forest)	Acres	989,742			
Recreation			Significant Fisheries		
ROS categories					
Primitive	Acres	49,993	Stream miles	Miles	1325
Semi-primitive, non-motorized	Acres	342,923	Fish Habitat	Miles	630
Semi-primitive motorized	Acres	152,346	Stream Habitat		
Roaded Natural	Acres	43,471	Spawning	Acres	912
Roaded Modified	Acres	395,020	Rearing	Acres	719
Roaded	Acres	5989	Lakes	# of	762
			Lake Habitat	Acres of	3479
Range			Elk		
Existing obligated suitable range	Acres	143,944	Winter Range	Acres	33,224
Allotments	# of	61			
Timber			Roadless/Wilderness		
Biologically Suitable	Acres	654,672	Existing Wilderness	Acres	72,614
In Management Areas suitable for mgmt.	Acres	288,717	Existing Inventoried Roadless (excludes Wilderness) *	Acres	370,344
Total Timber Program					
Sales in 10 years	# of	37	Recommended Wilderness	Acres	121,201
Total Sale Volume	MMBF	95.7			

* In addition, a large portion of the West Pioneer Montana Wilderness Study Act area (149,731 acres) that lies in the Big Hole drainage will remain roadless. This area is not a part of the roadless inventory at this time.

Water

There are 98 subdrainages in the Big Hole River drainage. Overall, the capacity of the National Forest lands in these subdrainages to receive, store, and produce water is relatively high. Stream turbidity is low, and water quality is high.

Fisheries

Fisheries values are high in the Forest drainages that feed the Big Hole River. Major drainages provide some spawning grounds for the Big Hole fishery. The Big Hole River provides habitat for the last known population of fluvial (river dwelling) arctic grayling in the lower forty-eight states. Major game species occurring in on-Forest lakes and streams include brook, cutthroat, and rainbow trout and various hybrids, ling, and arctic grayling.

Domestic Livestock Grazing

Grazing is a major activity in this area. Ranchers move cattle to National Forest lands for the summer, so they can raise hay on their own lands to carry herds over the long winter months.

Recreation

Recreation, too, is a common use of the Big Hole drainage. Recreationists can choose from a spectrum of experiences that includes opportunities for solitude in the Anaconda-Pintler Wilderness to picnicking or camping at developed facilities such as those along Wise River and at Miner and Twin Lakes. Although much of the area is inventoried as "roadless"; four-wheel vehicle, motorcycle, and all-terrain vehicle travel on trails and established wheeltracks is common. Most of the area is used intensively during hunting season by individual hunters and by outfitter and guide operations. Roads to developed campgrounds along tributaries to the main drainage of the Big Hole River are accessible by passenger car.

In the winter, much of the National Forest land in the Big Hole drainage is accessible by snowmobile. The Pioneer Loop in the West Pioneer Mountains and the Wise River-Polaris National Snowmobile Trail are a favorite trails for resident and visiting snowmobilers. Cross-country skiing is increasing rapidly, and skiers enjoy groomed trails and challenging treks where there are no groomed trails.

Wildlife

The Big Hole drainage provides excellent habitat for many wildlife species, including high quality big game habitat. Many furbearers inhabit the area, and upland birds are also found in the Big Hole. The threatened grizzly bear, the endangered gray wolf and bald eagle, and special interest species such as the wolverine are occasionally observed in the drainage. Nongame wildlife are numerous and provide considerable enjoyment to the viewing public.

The southern portion of the Fleecer Range, and the western and northeastern portions of the West Pioneer Mountains are considered to be important elk winter range. Elk migrate considerable distances to reach these winter ranges. Due to excessive snow depths, many of the other subdrainages that occur on the Forest are not used as elk winter range. However, moose utilize many of the subdrainages in the Big Hole for wintering.

The Big Hole drainage also provides habitat for mule deer, whitetail deer, bighorn sheep, mountain goat, mountain lion and black bear. The overall habitat is considered highly productive.

Timber

Overmature, decadent, coniferous forest covers much of the National Forest land in the Big Hole drainage, with small, isolated stands of aspen. Lodgepole pine is the major species with some Douglas-fir occurring on drier, lower elevation sites.

In the West Big Hole, much of the lodgepole pine is heavily infested with mistletoe. Mountain pine beetle killed 50 to 75 percent of the pine during the 1920's, and most of the bug-infested timber is still lying on the ground. Sawtimber and posts and poles have been cut throughout the area since early settlement, mostly for local consumption.

Timber harvest has occurred most extensively in the west and northwest portions of the drainage.

In the Pioneer Mountains timber harvest has been limited primarily to post and pole cutting and firewood removal, although there have been some commercial sales around the "edges" where access has been relatively easy. Harvest in the Fleecer Mountains has occurred most extensively in the Jerry, Divide, and Long Tom drainages.

Minerals and Energy Resources

The search for and development of mineral and energy resource is ongoing in the Big Hole drainage. Gold, silver, tungsten, copper, and associated minerals have been produced, and mining activities continue. There are numerous molybdenum occurrences within the Big Hole drainage. Phosphate has been mined near Wise River, and occurs in a number of other locations. An oil and gas wildcat well was drilled near Wisdom around 1980 but was not successful. Although the geologic conditions it tested do not appear to extend on to National Forest lands, oil and gas leases cover some of the drainage, and a limited amount of geophysical exploration has occurred.

Other Management Considerations

Fire

Fire occurrence is low to moderate, primarily depending on elevation and precipitation. However, because much of the drainage is littered with downfall from past insect and disease infestation, there is potential for catastrophic fire.

Insects and Disease

Mountain pine beetle is presently endemic and sporadic in most areas of the drainage with risk ratings varying from low to high. There is currently some infestation of spruce budworm in Douglas-fir in portions of the drainage. Mistletoe occurs in much of the overmature lodgepole pine.

Noxious Weeds

Knapweed is currently a problem on the Idaho side of the Continental Divide and in the Bitterroot Valley to the north. Occurrences of the weed are presently infrequent in the Big Hole drainage; however, the potential for infestation does exist.

Patented Mining Claims

Ground disturbing activities associated with developing mining claims have the potential to cause sedimentation of waters flowing through these properties. Depending on the mineral being mined, there also may be some danger of toxic pollution of these waters.

Private lands

All of the streams that flow from the National Forest cross private lands before draining into the Big Hole River. These private lands are used in the summer primarily for raising hay crops to feed livestock herds over the long winter months. Ranchers utilize water from the Big Hole tributaries to irrigate croplands. Thus, there is some potential for dewatering of these tributaries during the summer. In addition, haying activities and crop fertilization have some potential to impact the quality of the water that flows through the private lands.

Expected Future Condition - How will the National Forest Lands in the Big Hole Drainage Change Over the Next 10-15 Years?

Over the next 10 to 15 years, the Big Hole drainage will undergo some change. The evidence of man's activities will become more prevalent, particularly in the form of additional openings in the Forest canopy to accomodate timber harvest units and roads. Younger stands of timber will be in evidence as harvested areas regenerate, and age class diversity in the timber will be improved. There will be more road beds, even though many of the roads will be restricted from public use during part or all of the year.

Public access to the Forest and, in some limited areas, within the Forest will increase. Appendix E displays the public access points that will be sought over the next ten years. Recreation activities will change in some parts of the drainage, with visitors who enjoy roadless recreation activities shifted away from some of the areas that are being roaded to the more pristine parts of the drainage. Road-based recreation and hunting may be expected to increase in some areas that were previously unavailable to recreationists who were unable to walk long distances or obtain access through private lands. Fishing opportunities on-Forest are expected to increase as access to the Forest is increased. Wilderness recreation may slightly increase with the designation of additional wilderness in the West and North Big Hole and East Pioneers.

Traditional ranching operations are not expected to be much affected by management of Forest lands. However, allotment management may change as allotment management plans are completed or updated and intensive management systems are implemented. Attainment of Forest Plan management objectives for riparian areas will require investment in structural improvements and the cooperation of the permittees.

Several mining properties now being developed may be in production with 10-15 years. There is likely to be an increase in the number of miles of exploration and development mining roads that exist within the Big Hole drainage. Oil and gas exploration may occur.

Management Direction

1. Summary of direction

In summary, the Forest is providing a mix of resource uses that responds to public concern for the values of the Big Hole drainage. Water quality and fisheries are of utmost importance, and scheduling, implementation, and monitoring of activities will be responsive to protection of those values. Critical wildlife areas have been identified and standards will be applied to ensure maintenance and protection of these critical habitats. Timber harvest has been reduced throughout the drainage in response to concern for other important resource values. However, there are areas in the Big Hole drainage that can benefit from timber management and where a positive cash flow from timber harvest can be expected. These lands remain in the suitable timber base and will be scheduled for harvest sometime in the planning horizon. In areas where timber harvest is scheduled, Forestwide and Management Area standards will be applied to protect other values while ensuring efficient use of the timber resource. Livestock grazing will continue on existing allotments with management designed to protect riparian and winter range values. Mining and oil and gas activities will continue with access restrictions necessary to protect other resource values. Site occupancy stipulations may be used in the case of oil and gas exploration and/or development to provide additional protection of surface resources.

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2. Management Area Assignments and Timber Suitability

The following table shows the acres and timber suitability by Management Area within the Big Hole drainage:

Table V-2 Big Hole Drainage Management Areas and Timber Suitability

Mgmt Area	Acres	Timber Suitable for Management?	Mgmt Area	Acres	Timber Suitable for Management?
1	149,160	no	16	98,005	yes
2		no 1/	17	4497	yes
3		no 1/	18	10,954	yes
4		no 1/	19	5910	yes
5		no 1/	20	123,817	yes
6		no 2/	21	20,364	yes
7	733	no	22	13,982	no
8	203,242	no	23	15,643	no
9	193,815	no	24	55,285	no
10		no 2/	25	50,180	no
11		yes 1,3/	26	17,308	yes
12		yes 1,3/	27		no 2/
13	7862	yes	28		no 2/
14	8979	no	29		yes 1/
15		yes 4/	30	10,006	no

1/ Acres not calculated.
2/ None identified in Big Hole drainage.
3/ Suitable for timber management *if* adjacent Management Area is suitable.
4/ There is no Management Area 15 in the Forest Plan.

The National Forest land within the Big Hole drainage comprises 25 Management Areas, each with different management goals and direction.

The Management Area boundaries are not firm lines and do not always follow easily found topographic features, such as major ridges. The boundaries represent a transition from one set of opportunities and constraints to another with management direction established for each. The boundaries are flexible to ensure that the values identified are protected and to incorporate additional information gained from further on-the-ground reconnaissance and project level planning.

The Forest policies and management standards, and monitoring and evaluation requirements apply to all Management Areas. Standards address maintenance of water quality, fisheries habitat, big game habitat and security, and visual quality.

As elsewhere on the National Forest, "Best Management Practices" will be incorporated into all ground disturbing activities to minimize and mitigate potential sediment production. These measures employed by the Forst Service may include road surfacing, cut/fill slope mulching, slope stabilization, closing and obliterating roads, compaction, and slash windrows (if roads are constructed with outslope). On sale areas, measures will include closing the operation until dry soil conditions occur, placing slope breaks on harvested ground, and placing sediment traps. Appendix W provides a more comprehesive presentation of candidate practices. These measures will be applied depending on the conditions of the sites as determined through the environmental analysis and through monitoring of project development.

3. Harvest Schedule

The following table displays the timber sales and associated new road construction planned in the Big Hole Drainage in the next ten years:

Table V-3 Big Hole Drainage Ten Year Timber Management Activity Schedule

Sale Name	GDA	Harvest Year	Harvest Volume MMBF	Harvest Acres	Road Miles
Doolittle	2A	1986	6.1	689	15.0
Buffalo	2C	1986	1.5	460	3.5
Elkhorn I	2E	1986	3.4	310	6.0
Trapper Creek	2I	1986	.9	110	2.0
Foolhen	2J	1986	1.6	170	1.0
Howell	1L	1987	1.2	150	1.0
Adson Creek	2I	1987	1.9	240	3.0
Andrus	1K	1988	5.0	863	7.0
Squaw Papoose	2A	1988	3.5	696	8.4
Swamp Creek	2I	1988	1.5	200	2.0
Harriet Lou	2J	1988	1.8	250	3.0
Sheep Trail	1D	1989	6.0	990	22.0
Walker Moose	2A	1989	2.4	350	6.0
Thief Creek	2H	1989	.8	135	1.0
Buffalo Triangle	2I	1989	2.3	330	5.0
Mudd Creek	1C	1990	3.2	537	6.0
Pintler	1C	1990	.7	100	1.0
Chief Joseph	1E	1990	2.5	487	11.4
Sawmill	1F	1990	2.5	653	10.0
Canyon Creek	2I	1990	.7	90	1.0
Cow Moose	1E	1991	7.5	1433	32.1
South Big Hole (40%)	1K	1991	.8	161	2.0
Toomey Creek	2A	1991	2.3	310	5.0
Hungry Hill	3A	1991	1.4	180	4.0
Retie	1D	1992	4.0	1068	8.0
Jackson	2B	1992	2.0	500	8.0
Moose Woods	3A	1992	2.3	288	5.0
Bender Johnson	1D	1993	4.5	600	7.5
Upper Bryant	2J	1993	1.5	250	4.0
Parker Creek	3A	1993	1.0	166	2.0
Starlight	3A	1993	1.8	235	3.0
Granulated	3A	1993	.4	70	.5
Bull Creek II	2C	1994	2.5	500	2.0
Elkhorn II	2E	1994	4.3	700	9.0
Bacon Fork	1B	1995	2.1	269	4.0
Whistling Squirrel	1E	1995	6.0	1023	12.0
Calvert Loop	2J	1995	1.8	230	2.0

Firewood and Christmas tree cutting will occur seasonally in those Management Areas where these practices are allowed.

Monitoring and Evaluation

Monitoring activities on National Forests are essential in evaluating the Forest Plans. Monitoring helps determine if the direction of the Forest Plan is being carried out and if that direction is the appropriate direction for management of the land and resources. Both of these aspects of monitoring are important in the Big Hole drainage.

All of the monitoring elements identified in Chapter VI, Table VI-1, apply to the Big Hole drainage. However, while all the items will be monitored and evaluated during implementation of the Plan, attention to water quality of the Big Hole drainage is of paramount importance. The biggest potential impact associated with Forest Service management in the Big Hole drainage of concern to the publics who commented on the Revised Draft Environmental Impact Statement for the Forest Plan is sediment and its effect on fish production and habitat. Monitoring is ongoing and will be continued to determine the existing sediment conditions in Forest streams in the Big Hole drainage and to evaluate the potential for impacts from Forest management activities. Monitoring and evaluation will address the cumulative impacts of Forest Service timber harvest and road building. Additional impacts to the Big Hole fishery from private land irrigation or riparian practices are additive to those addressed in watershed monitoring for this Forest Plan.

CHAPTER VI

Monitoring and Evaluation

Monitoring activities on National Forests are essential in evaluating the Forest Plans. Monitoring helps determine if the direction of the Forest Plan is being carried out and if that direction is the appropriate direction for management of the land and resources. Both of these aspects of monitoring are important on the Big Hole drainage.

All of the monitoring elements identified in Chapter IV, Table IV-[illegible], apply to the Big Hole drainage. However, while all the items will be [illegible] and evaluated during implementation of the Plan, attention to water quality of the Big Hole drainage is of paramount importance. The [illegible] associated with Forest Service management in the Big Hole drainage [illegible] to the position was expressed in the [illegible] Environmental Impact Statement that the Forest Plan is completed and its effects on fish [illegible] and habitat. Monitoring is ongoing and will be [illegible] to evaluate the existing and basic conditions in Forest streams in the Big Hole drainage and [illegible] the potential for impacts from Forest management activities. Monitoring and evaluation will include the [illegible] Arctic Grayling [illegible] and [illegible]. Additional [illegible] in the Big Hole [illegible] of [illegible] monitoring [illegible].

VI. Implementation

A. Introduction

Implementation of the Beaverhead National Forest Plan requires moving from an existing management program, with a budget and "targets" for accomplishment, to a new management program with a budget, goals, and objectives that provide a different way of addressing the issues and concerns people have voiced about National Forest management. This Forest Plan establishes the direction for the Beaverhead National Forest for the next ten to fifteen years, when used in conjunction with Forest Service Manuals and Handbooks and the Northern Regional Guide.

The remainder of this chapter explains how management of the Beaverhead National Forest moves from the Current Direction and Existing Situation to the Proposed Action, all described in the Beaverhead National Forest Plan Environmental Impact Statement. The following sections describe:

--aspects of implementation that are influenced by previous management activities and objectives;

--the relationship between project planning and this Forest Plan;

--the goals of and requirements for monitoring and evaluation; and

--the circumstances which could require the Forest Plan to be amended or revised.

The Forest Plan consists of this document, called the Beaverhead National Forest Plan, as well as associated documents and reports considered supplemental or appendices to this document. Programming, budgeting, workforce management, reviews, activity planning and implementation, public involvement and information, monitoring, and evaluation are all facets of land and resource management that will be governed by the direction contained within this Forest Plan and its associated documents.

B. Influence of Past Management Direction and Activities on Future Management Options

Chapter III defines management direction for specific areas of the Beaverhead National Forest. In some instances, this direction represents a change from current management direction. Where no previous management activities have occurred, the allocations of this Forest Plan can be put into effect from a neutral point. However, in areas where management activities have occurred to meet objectives other than those now specified, a transition period may be required to bring management fully into line with this Forest Plan. Examples of areas where a transition period may be required are:

--areas previously managed for timber production, where harvest has occurred intensively and in large blocks, that will be now be managed to ensure compliance with the Forest Plan standards regarding maintenance of effective elk habitat security;

--allotments with a long history of domestic livestock grazing and a low intensity of management that will now be managed to assure better distribution of livestock use and protection of riparian, fisheries, and wildlife values; and

--areas with a history of motorized recreational use resulting in jeep trails that will now be recommended for wilderness classification. A period of time will ensue before these traces of man's use are erased.

In addition to specifying management direction for areas of the Forest, this Forest Plan schedules management activities. In some situations, previous management activities influence the scheduling of future activities.

For example, throughout most of the National Forest, historic timber management activities have not caused a problem with the implementation of this Forest Plan's timber harvest schedule relative to water quality or fisheries concerns. The area where this could be a concern, the West Fork of the Madison, is not scheduled for any timber management activities until the early 1990's, with the exception of a sale turned back by the purchaser. By the early 1990's, regeneration in harvested areas is expected to be such that low intensity additional activities can be conducted in compliance with Forest Plan standards. However, if in the early 1990's regeneration is not as expected, and additional activities would violate Forest Plan standards, then those planned activities will be rescheduled.

Projected levels of production for specified resources require that all lands assumed to be available for projected activities are, in fact, available. For example, the allowable sale quantity is calculated from a suitable land base, all of which is available for scheduling of timber management activities that meet Forest Plan standards. Harvest of that allowable sale quantity on only a portion of the suitable acreage would lead to problems in meeting Forest Plan standards. Thus if the land from which "outputs" are to be produced is not available, the level of production will have to be reduced commensurately.

C. Project Planning

The Forest Plan serves as the single land management plan for the Beaverhead National Forest. All other land management plans are replaced by the direction of this Forest Plan or incorporated explicitly as appendices. The Anaconda-Pintler Wilderness Management Plan, the Lee Metcalf Wilderness Management Plan, Research Natural Area plans, National Recreation Trail reports, and the Indian Creek and Rattlesnake Creek Municipal Watershed Management Plans are incorporated into the Forest Plan as unbound appendices. Management guidance for those areas recommended for addition to the Wilderness System will be completed and incorporated as unbound appendices as areas are classified.

Similiarly, this Forest Plan directs the management of all resources on the Beaverhead National Forest. All previous resource management plans are replaced by this document. Resource management objectives are displayed in Chapter II and schedules of resource management practices for each Management Area are displayed in Chapter III. Activity schedules for selected resources are included as appendices.

Several documents designed to give further guidance to management activities have been or will be developed under the "umbrella" of this Forest Plan. That is, they will express and refine the guidance contained in this document. They are:

--The Southwestern Montana Interagency Visitor's Map
--Area transporation analyses
--Allotment Management Plans
--Inform and Involve action plans
--Fisheries Habitat Improvement Schedules
--The Beaverhead National Forest Fire Management Plan
--The Greater Yellowstone Ecosystem Bald Eagle Management Plan
--The Beaverhead National Forest Soil Survey
--The Continental Divide Wolf Coordination Plan

The management direction provided by this Forest Plan comprises the sideboards within which project planning and activities take place. The Forest Plan defines Management Area goals and management standards that guide project activities toward achieving a desired future condition for the Management Area and, collectively, for the National Forest. It specifies a schedule for project activities (management practices). It provides guidance concerning potential land type and habitat type constraints, including assumptions about the appropriate vegetation management practices for timber sale projects. On-the-ground project analyses validate or invalidate the appropriateness of those assumptions.

Within this guidance, the projects are developed to most efficiently and effectively accomplish the management goals and objectives. All National Environmental Protection Act (NEPA) requirements will be complied with in all projects.

As part of project planning, site specific water quality effects will be evaluated and control measures designed to ensure that the project will meet Forest water quality goals; projects where analysis indicates that, even with mitigation measures, State of Montana water quality standards can not be met will be redesigned, rescheduled, or dropped from the program.

In addition, as part of project planning where there is significant federal investment proposed, an area specific cash flow analysis will be conducted. This analysis will refine the economic analysis conducted through the Forest planning process. Timber sale project planning is of particular concern.

A sensitivity analysis conducted in the development of the Forest Plan indicated that the economically suitable timber base is sensitive to changes in assumptions about base timber values and price (value) increases. In particular, lands greater than 45 percent slope, assumed to require more costly logging equipment than flatter ground, displayed PNV's in the FORPLAN analysis that changed from positive to negative (in some cases, significantly negative) depending upon the different assumptions about timber values that were used. If, in implementation of this Forest Plan, the prevailing timber values are more similiar to those tested in the sensitivity analysis (see Appendix B of the EIS) than in the FORPLAN solution, then PNV's for these acres will be negative with the cost of management over time exceeding the value of the timber resource. Five percent of the suitable timber base lands over 45 percent slope are scheduled for harvest in the first decade of implementation. The area economic analysis will evaluate the more site specific costs and benefits of management, focusing on long term cash flow. If initiating management of the scheduled lands over 45 percent in slope in the first decade indicates a negative cash flow (as viewed over time) OR if the initial entry attracts no bids, the Forest Service may elect to redesign the sale offering to improve the long term cash flow associated with management of the area and/or the marketability of the sale offering. If these are not viable options, the lands in question over 45 percent in slope could be dropped from the program. No acreage or volume replacement will be scheduled in the first decade to offset elimination of areas with slopes over 45 percent. When the Forest Plan is revised, the costs and benefits of the lands over 45 percent in slope will be reevaluated to determine if they should be retained in the suitable timber base.

The environmental analyses conducted for project activities, such as timber sales, will normally be documented in a project file Environmental Assessment if the environmental analysis indicates that the project is in keeping with the goals and objectives of the Forest Plan; if the environmental effects identified and documented in the Environmental Impact Statement are determined to be accurate and appropriate; if the proposed project is deemed not controversial through the scoping phase of the environmental analysis; and if through the analysis the project is found to not have a significant effect on the human environment. If any or all of the criteria listed above do not apply, the project file may be supplemented by a more "formal" document Environmental Assessment and/or by an Environmental Impact Statement.

Through the project planning process, changes in land allocations may be proposed where a different allocation is believed to more accurately represent the over-all management goals and objectives of this Forest Plan. Procedures for recommending, reviewing, and approving land allocation changes are incorporated as part of this Forest Plan through Appendix M.

Project environmental analyses provide an essential source of information for Forest Plan monitoring. First, as project analyses are completed, new or emerging public issues or management concerns may be identified. Second, the management direction designed to facilitate achievement of the Management Area goals are validated by the project analyses. Third, the site specific data collected for project environmental analyses serve as a check on the correctness of the land designation. All of the information included in the project environmental analyses is used in the monitoring process to determine when changes should be made in the Forest Plan.

D. Monitoring and Evaluation

A critical part of Forest Plan implementation is monitoring and evaluation. Monitoring and evaluation comprise the management control system. It will provide the decisionmaker and the public information on the progress and results of implementing the Forest Plan.

Monitoring and evaluation each have a distinctly different purpose and scope. In general, monitoring is designed to gather the data necessary for the evaluation. During evaluation, data provided through the monitoring effort are analyzed and interpreted. This process will provide annual and periodic summary data necessary to determine if Forest Plan goals and objectives are being met; if management standards are being applied; and if the effects of management are as they were predicted.

In sum, monitoring and evaluation entail comparing the end results being achieved to those projected in the Plan. Costs, outputs, and environmental effects, both experienced and projected, will be considered.

To do this, a comparison will be made, on a sample basis, of overall progress in implementing the Plan as well as whether the overall relationships on which the Plan is based have changed over time. When changes occur, they will be evaluated as to their significance, and appropriate amendments or revisions made.

The goals for monitoring and evaluating this Forest Plan are to determine:

- how well the Forest is meeting its planned goals and objectives;

- if existing and emerging public issues and management concerns are being adequately addressed;

- how closely the Forest Plan's management standards are being followed;

- if outputs and services are being provided as projected;

- if the effects of implementing the Forest Plan are occurring as predicted, including significant changes in the productivity of the land;

- if the dollar and manpower costs of implementing the Forest Plan are as predicted;

- if implementing the Forest Plan is affecting the land, resources, and communities adjacent to or near the Forest;

- if activities on nearby lands managed by other Federal or other governmental agencies, or under the jurisdiction of local governments, are affecting management of the Forest;

- if research is needed to support the management of the Forest, beyond that identified in Chapter II of the Forest Plan; and

- if there is a need to amend or revise the Forest Plan.

Monitoring elements are a select subset of all the resources and uses that could be monitored. They include those items on which implementation may have a potentially significant effect; items where achievement of a relevent goal or objective is going to be difficult; items where projected effects may or may not occur as predicted; and items where accomplishment of a objective or meeting a standard determines ability to achieve another goal or objective. Monitoring focuses on those facets of land and resource management which could most critically affect Forest Plan implementation. Thus, there is a reason for including an item in the monitoring requirements.

The monitoring requirements for this Forest Plan are outlined in Table VI-1, Forest Plan Monitoring Requirements. These requirements address the items to be monitored, data sources, expected precision and reliability, frequency of measurements (sample size and schedule), reporting period, and acceptable variability. Some of the monitoring items are applicable to specific Management Areas; a listing of applicable monitoring items is included in the direction for each Management Area (Chapter III).

Other monitoring items are more applicable to broad areas or are Forest-wide in nature, and will be evaluated from such sources as the data base, Forest attainment reports, public involvement processes, and non-Forest Service sources. These items include but are not limited to the following:

--recreation use levels
--insect and disease surveys
--public issues not addressed by the Forest Plan

The Monitoring Requirements contain the following elements:

1. Monitoring Item (Number and name) - The numerical identifier and the resource to be monitored.

2. Activity, Practice, or Effect to be Measured - A concise statement of what is to be monitored.

3. Unit of Measure - The variable to be measured for each monitoring item.

4. Data Source - A description of monitoring techniques and/or sources of information to be used. In most instances, these data sources are records and surveys the Forest Service and/or other agencies conduct for other purposes than this monitoring plan.

5. Expected Precision - A subjective descriptor to measure the expected accuracy with which the data are collected. Precision is qualitatively rated as high, moderate, or low.

6. Expected Reliability - A measure of how accurately monitoring and a specific report reflects the total Forest situation. Reliability is qualitatively rated as high, moderate, or low.

7. Frequency of Measurements - The amount of data (sample size) and/or frequency for its collection (sample schedule) deemed necessary to achieve acceptable levels of precision and reliability.

8. Reporting Period - The interval when some type of report or summary of collected data is prepared for review and possible action.

9. Variability (±) - A statement or specified level expressed in percent that defines the limit or threshold of deviation. Exceeding this monitoring standard should result in further evaluation and possible action to bring the experienced situation and the Forest Plan into congruence.

Evaluation of data gathered during monitoring will be guided by the Decision Flow Diagram detailed in Figure VI-1. As indicated in the diagram, the results of this evaluation lead to decisions on further action of the following types:

- continuing the management practice;
- referring the problem to the appropriate line officer for improvement of the application of the management practice;
- modifying the management practice as a Forest Plan amendment;
- modifying the land management prescription as a Forest Plan amendment;
- revising the schedule of outputs;
- revising the cost/unit output; or
- initiating revision of the Forest Plan.

The document resulting from the use of the Decision Flow Diagram constitutes the evaluation report. As applicable, the following will be included in each evaluation report:

- A quantitative estimate of performance comparing outputs and services with those projected by the Forest Plan;
- Documentation of measured effects, including any change in productivity of the land;
- Unit costs associated with carrying out the planned activities as compared with unit costs estimated during Forest Plan development;
- Recommendations for changes;
- A list of needs for continuing evaluation of management systems and for alternative methods of management;

- A list of additional research needed to support the management of the Forest; and

- Identification of additional monitoring needs to facilitate achievement of the monitoring goals.

E. Amendment and Revision

The Forest Supervisor may amend the Forest Plan. Based on an analysis of the objectives, standards, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the Plan. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

A Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly or when changes in RPA policies, goals, or objectives would have a significant effect on Forest level programs. In the monitoring and evaluation process, the interdisciplinary team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of the Forest Plan. The Forest Supervisor shall review the conditions on the land covered by the Plan at least every 5 years to determine whether conditions or demands of the public have changed significantly.

Table VI-1

FOREST PLAN MONITORING REQUIREMENTS

Monitoring Item	Activity, Practice, or Effect to be Measured Measured	Unit of Measure	Data Source	Expected Precision 1/	Expected Reliability 1/	Frequency of Measurements		Reporting Period	Variability (±) Which would Initiate Further Evaluation
						Sample Size	Sample Schedule		
1-1 Wildlife	Elk population trend--How are populations responding to the provided NF habitat capacity?	# of Elk	MT Dept. FW&P Surveys, Land Owner Information	M	M	100% of FW&P Surveys	Annual	5 years	± 10% deviation from projected capacity
1-2 Wildlife	Forage on winter & seasonal range --Is adequate forage available to sustain the projected big game (elk) population?	Acres	Allotment Management Plans, PU Studies, EA's, Field Observation, Transects on winter range	M	M	100% of Updated AMP's, EA's, Studies Annual analysis of critical winter range Other range--80% in 5 years	Annual	5 years	10% of AMPs do not meet Forest Plan utilization standards 10 % decline in acres by condition or trend 10 % variation in actual utilization vs. AMPs' objectives for seasonal range. 10% variation in actual utilzation vs. AMPs' objectives for winter range.
1-3 Wildlife	Population trend (moose, deer, big horn sheep)--How do populations respond to NF habitat capacity?	# of Animals by species	MT Dept.FW&P Surveys, Land Owner Information	M	M	100% of FW&P	Annual Surveys	5 years	± 10% deviation from projected capacity.
1-4 Wildlife	Winter Range Condition/trend (moose, deer, big horn sheep) Are winter range conditions being maintained or improved?	Acres	Transect Data Inspections	M	M	20% of Study Plots	Annual	5 year	10% decline in acres by condition or trend
						20% of Winter Range	Annual	5 year	
1-5 Wildlife	Wildlife Habitat Improvement Were scheduled habitat improvement projects accomplished?	Acres	MARS Report, Project review of wildlife improvements	H	H	100% of Attainment reports, Review one improvement project per District per year	Annual	5 year	Less than 90% accomplishment in 5 years.

1-6 Wildlife	Sagegrouse-indicator for sagebrush dependent species	# of Animals	MT Dept. Fish Wildlife and Parks Population Transects and Harvest Data	M	M	100%	Annual	5 year	More than 10% decline in population in a five year period
1-7 Wildlife	Trumpeter Swan-indicator species	# of Animals	MT Dept. Fish, Wildlife and Parks Population Data USFWS population and nesting success data	M	M	100%	Annual	5 year	More than 10% decline in population in 5 year period
1-8 Wildlife	Threatened and Endangered Species bald eagle peregrine falcon gray wolf grizzly bear	Acres of habitat # of animals	MT Dept. FW&P and FS field observations, nest surveys; GYE Bald Eagle Working Group; Continental Divide Wolf Coordination Plan; GYE Grizzly Recovery Plan	M	M	100%	Annual	5 year	Any measurement of decline in habitat
1-9 Wildlife	Cavity Nesting Habitat Mgmt level % shown by timber types in Forestwide Standards	# Snags/Acre	EA's, Project Reviews	M	M	100% of EA's One project review per District per year	Annual	5 year	Snag level 10% below standards
1-10 Wildlife	Habitat Effectiveness (Security Cover-Road Closures)	Acres of Effective Cover	EA's, Project Reviews	M	M	100% of EA's One project review per District per year	Annual	Annual	Any change in projection below 70% effective cover.
1-11 Wildlife	Diversity of Plant Communities (Old Growth Habitat Acres) Habitat for old growth dependent species (pine marten, goshawk)	Acres # of animals	EA's, Project Reviews, TSMRS, Compartment exams, Mt.Dept. FW & P data	M	M	100% of EA's, One project review per District per year	Annual	5 year By District 10 Yrs Forestwide	Anything less than Forest Plan standards.

2-1 Fisheries	Fisheries Habitat Improvement -Where scheduled habitat improvement projects determined to be necessary and were they accomplished?	Projects Stream miles	MAR Attainment Report, Project review of Fisheries Habitat improvement Project	H	M	100% of Attainment Reports, review 1 improvement Project per District per year	Annual	Annual	Less than 90% accomplishment in five years
2-2 Fisheries	Cutthroat trout and grayling indicator species	# of fish	Mt. Dept. of FW&P electroshocking data, population surveys	M	H	100 % of data	Annual	5 year	Measureable declines in populations
2-3 Riparian	What are management effects on riparian habitat; impacts on overhanging bank vegetation and bank stability; and effectiveness of utilization levels and silvicultural Rxs?	Acres	Utilization studies; PU plots, annual field reports. COW/FISH model analysis;water shed monitoring and inventory data, Program Reviews, Mt. Dept. FW&P data on fish populations	M	M	100% review of utilization studies over five years; 100% review of watershed data (see 3-1); one program review per District every five years. 100% of FWP data.	Annual	5 years	± 15% of habitat capability defined through Forest Plan; 5% difference between observed utilization and AMPs' objectives for riparian areas.
3-1 Watershed	What are the impacts of management activities on sediment production?	tons/yr	Field measurements	H	H	270 samples/station/year	Daily	Annual	Any increase that is in violation of Forest Plan Standards.
3-2 Watershed	How accurate are assumptions that scheduled harvest can meet watershed standards?	Acres	Timber EA's 10 yr program	H	H	Area analysis units	Annual	Annual	±15% change in the amount that can be scheduled within Plan standards vs. planned timber harvest acres.
3-3 Watershed/ Soils	Are BMP's effective?	projects	field review	M	M	5 projects/yr	Annual	5 Year	BMP's found inadequate/ ineffective

4-1 Soils	What are impacts of activities on soil displacement and organic residue?	Benchmark vs.sample soils	Field data	M	M	100% of timber sales scheduled	Annual	5 year	Forest Plan standards not met.
5-1 Recreation	How does actual dispersed/developed/Wilderness Use compar to projected use?	RVD's	RIM Reports Field observations, traffic counts	M	M	100% of available data	Annual	5 years	± 20% variation from projections over five years.
5-2 Recreation	Is actual wilderness use in compliance with Wilderness management direction?	N/A	Field Reviews	M	M	One Field review per year per wilderness	Annual	5 year	Noncompliance with wilderness management direction.
5-3 Recreation	Are the actual changes in the inventoried roadless acres comprable with the changes predicted in Forest planning?	Acres	Roadless Inventory Maps/TIS/ Timber Sale maps	M	M	100% of Map Updates	Annual	5 year	Decrease in roadless acres 5% greater than predicted
6-1 Range	Forage & grazing capacity--Are permitted AUMS's and capacity similiar?	# AUM's Acres suitable	Program Reviews; permit administration RAMIS, allotment adimistration	H	H	One program review per District every five years	Annual	5 year	± 5% change from the projected AUM capacity
6-2 Range	Range Improvement Construction & Maintenance-- are the projects being accomplished as programmed?	projects acres	RAMIS & MARS	H	H	100% of Attainment Reports; one program review per District every five years	Annual	5 year	Less than 90% of scheduled projects accomplished over five years.
6-3 Range	Noxious Weed Infestations and control program Are the necessary program levels to control weed infestations being identified?	Acres	MARS, District Mapping, Program Review	H	H	100% of MARS plus 1 program review/per District each 5 yrs	Annual	5 year	Less than 80% accomplished over five years.

6-4 Range	Are allotment management plans and updates being done as scheduled?	# plans	RAMIS MARS	H	H	100% of plans prepared or updated.	Annual	5 year	Less than 4 new plans per year; less than 13 updates per year.
6-5 Range	Production, utilization, and range condition and trends--are Forest Plan AUM capacity projections valid given Forest Plan standards?	AUM's	Program reviews, MARS, AMP's, EA's, annual field reports, PU studies	M	M	One program review/per District every five years	Annual	5 year	10 % less than projected carrying capacity.
7-1 Timber	Volume and Area Harvested--Are Forest outputs (MCF,MBF, Acres) consistent with Forest Plan projections/yield assumptions/conversion ratios?	Acres/MMCF MMBF	10 yr program, Quarterly cut & sold reports, MAR'S, cruise summaries	H	H	100%	Annual	5 year	±10% change from ASQ and or projected acres harvested over five years
7-2 Timber	Volume & Area Harvested by Logging System Harvest Method, Working Group, species, and MA. Is harvest accomplished as scheduled?	Acres/MMCF MMBF	Sale reviews, EA's cruise summaries, TSMRS	H	H	100%	Annual	5 year	± 20% change from the projected mix of lands and species.
7-3 Timber	Is there change in the suitable timber base as a result of implementation and ground truthing?	Acres	Area Analysis Process, EA's	H	H	100%	Annual	5 year	± 5% change in suitable acres over five years.
7-4 Timber	Cultural Treatments. Are the FORPLAN projections accurate & is work accomplished as scheduled?	Acres	TSMRS, Accomplishment reports	H	H	100%	Annual	5 year	± 20% change from projections over five years.

7-5 Timber	Accomplishment of Regeneration- Is natural regeneration occuring as predicted and are harvested lands restocked in five years?	Acres	TSMRS Accomplishment Reports	H	M	100%	Annual	5 year	Less than 90% accomplishment of natural regeneration 10% of harvested lands not adequately restocked in five years.
7-6 Timber	Assess silvicultural assumptions and practices-- Are standards being followed?	Projects	Silvicultural Rxs, EA's, Field reviews	M	M	2 field reviews per District	Annual	5 Years	Noncompliance with silvicultural guidance, questions regarding the validity of the silvicultural assumptions
8-1 Facilities	Are the assumptions about local/ collector density, miles, and standards correct?		TIS Inventory MAR's, Field review ATP's, EA's	H	H	100% 2 projects/yr	Annual Annual	5 years 5 year	± 10% in any one year; noncompliance with Forest Plan standards
8-2 Facilities	Are the assumptions about road management valid, esp. regarding closures and restrictions?	Miles	TIS Inventory Maintenance Plans, Visitor Map, Program Reviews	M	M	Program Review on one District each year	Annual	5 years	Noncompliance with Forest Plan
8-3 Facilities	Trail Management--Is the scheduled maintenance and reconstruction being accomplished as scheduled?	Miles	TIS Inventory, M.A.R.s	H	H	100%	Annual	5 year	Less than 80% of schedule accomplished over five years.
8-4 Facilities	Road Management- Is the scheduled maintenance and planned management occurring?	Miles	TIS Inventory, MARS	H	H	100%	Annual	5 year	Less than 80% of schedule accomplished over five years

9-1 Protection	Acres and Volume of Insect & Disease Infestation - Is the management direction adequate to deal with insect & disease problems	Acres	FPM Aerial observations by Regional Entomologist, Field Inspection	M	M	Forestwide	Annual	5 year	20% increase in rate of spread or volume loss compared to predicted mortality
10-1 Economics	Verification of predicted unit costs vs. experienced costs	Dollars	Timber sale appraisals, AMPs, MARS, close-out data PAMARS	H	H	100%	Annual	5 Years	± 15% of predicted costs over 5 years
10-2 Economics	Verification of predicted values for timber	Dollars	Timber sale contracts, area analysis models	H	H	100%	Annual	5 Years	± 25 % of prediction over 5 years
10-3 Economics	Assess program budget vs. actual dollars recieved	Dollars	5 yr. program, Final advice, 6500-17s	H tional	H	100%	Annual	5 Years	-15 % of prediction by funding item over 5 year period
11-1 Adjacent Lands, Resources, Communities	How does the NF management affect the local economy, resource values, local uses, and lifestyles?		Studies from appropriate resource functions; analysis of other Agency documents	H	H	100%	Annual	5 Years	Unacceptable results or impacts according to ID team and/or Management Team review
11-2 Adjacent Lands	What is the effect of other agencies or private landowners on N.F. management?		Analysis of other Agency plans	H	H	100%	Annual	5 Years	Unacceptable impacts on proposed activities; Forest Plan goals and objectives; or Forest Plan targets.
11-3 Issues	Emerging issues and changing social values		EA public involvement, target group analysis, content analysis	H	H	100%	Annual	5 Years	Issues not resolved or adequately addressed by Forest Plan

12-1 Allocations	Evaluate lands identified as not meeting physical or biological characteristics within assigned MA.	Acres	EA's, ID team review, timber sale position statements, AMP's	H	H	100%	Annual	5 Years	15%+ change in acres considered suitable for range or timber management.
12-8 Data Base	Assess, and update as needed Forest Plan data base.	Acres	Compartment Exams	H	H	100%	Annual	Annual	any deviation

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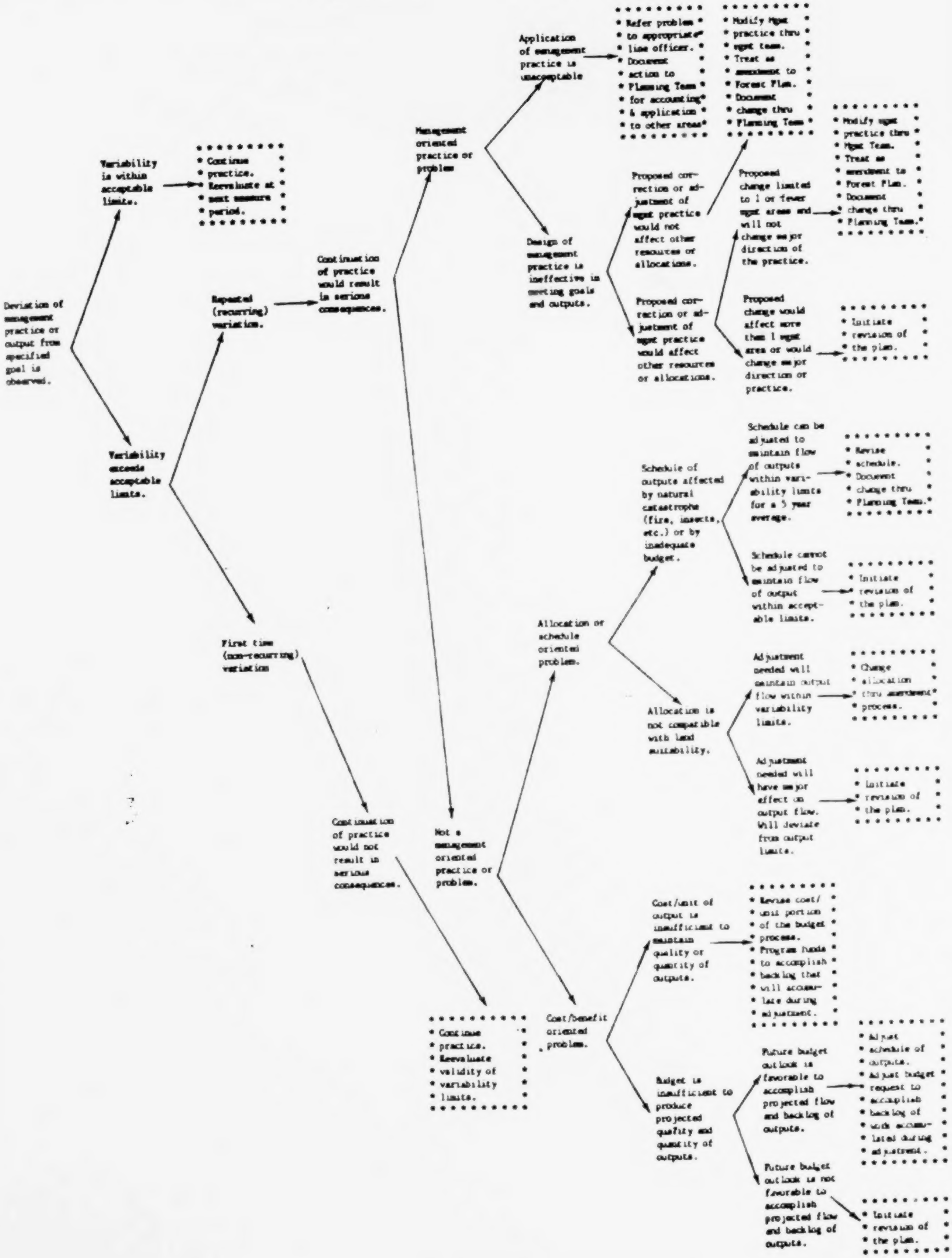
2/ L = Low
M = Medium
H = High

Figure VI-1


Deviation of management practice or output from specified goal is observed.
Variability is within acceptable limits.
* Continue practice. * Reevaluate at next measure period.
Variability exceeds acceptable limits.
Repeated (recurring) variation.
Continuation of practice would result in serious consequences.
Management oriented practice or problem
Application of management practice is unacceptable
* Refer problem to appropriate line officer. * Document action to Planning Team for accounting & application to other areas
* Modify Mgmt practice thru mgmt team. * Treat as amendment to Forest Plan. * Document change thru Planning Team
Design of management practice is ineffective in meeting goals and outputs.
Proposed correction or adjustment of mgmt practice would not affect other resources or allocations.
Proposed correction or adjustment of mgmt practice would affect other resources or allocations.
Proposed change limited to 1 or fewer mgmt areas and will not change major direction of the practice.
* Modify mgmt practice thru Mgmt Team. * Treat as amendment to Forest Plan. * Document change thru Planning Team.
Proposed change would affect more than 1 mgmt area or would change major direction or practice.
* Initiate revision of the plan.
First time (non-recurring) variation
Continuation of practice would not result in serious consequences.
* Continue practice. * Reevaluate validity of variability limits.
Not a management oriented practice or problem.
Allocation or schedule oriented problem.
Schedule of outputs affected by natural catastrophe (fire, insects, etc.) or by inadequate budget.
Schedule can be adjusted to maintain flow of outputs within variability limits for a 5 year average.
* Revise schedule. * Document change thru Planning Team.
Schedule cannot be adjusted to maintain flow of output within acceptable limits.
* Initiate revision of the plan.
Allocation is not compatible with land suitability.
Adjustment needed will maintain output flow within variability limits.
* Change allocation thru amendment process.
Adjustment needed will have major effect on output flow. Will deviate from output limits.
* Initiate revision of the plan.
Cost/benefit oriented problem.
Cost/unit of output is insufficient to maintain quality or quantity of outputs.
* Revise cost/unit portion of the budget process. * Program funds to accomplish backlog that will accumulate during adjustment.
Budget is insufficient to produce projected quality and quantity of outputs.
Future budget outlook is favorable to accomplish projected flow and backlog of outputs.
* Adjust schedule of outputs. * Adjust budget request to accomplish backlog of work accumulated during adjustment.
Future budget outlook is not favorable to accomplish projected flow and backlog of outputs.
* Initiate revision of the plan.

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CHAPTER VII

VII. Analysis of the Management Situation Summary

This chapter discusses the ability of the Forest to supply goods, services and uses within the planning area both at present and in order to meet [illegible]. Included is a discussion of the demand anticipated for specific uses of the Forest, and a discussion of the need or opportunity for any beneficial changes in the current management direction. The information needed to determine the current management was developed by means of an analysis that determined supply and demand conditions.

1. Forest Location and General Setting

The Forest is located in the southwest portion of Montana immediately east of the Continental Divide. It is located in [illegible] Counties. The land area contained within the Forest administrative boundary comprises approximately [illegible] acres, of which approximately [illegible] acres are [illegible].

The Forest [illegible] 11,000 feet. [illegible]

The Forest is [illegible].

The Forest [illegible].

2. Social/Economic Situation

[illegible]

A. Resource Elements

The following discussion is intended to portray the management situation as it relates to specific resource elements and services. [illegible]

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VII. Analysis of the Management Situation Summary

A. Introduction

This chapter discusses the ability of the Forest to supply goods, services, and uses within the planning area, both at present and in years to come. Included is a discussion of the demand anticipated for specific uses of the Forest, and a discussion of the need or opportunity for any beneficial changes in the current management direction. The information needed to evaluate the current management was developed by means of an analysis that determined supply and demand conditions.

1. Forest Location and General Setting.

The Forest is located in the southwest portion of Montana immediately east of the Continental Divide. It is included in Beaverhead, Madison, Silver Bow, Deer Lodge, and Gallatin Counties. The land area confined within the Forest protection boundary comprises approximately 2,218,683 acres, of which approximately 70,000 acres are in other than Forest Service jurisdiction.

The Forest encompasses a widely diverse setting ranging from wide open valley bottoms and sage covered foothills to high elevation glaciated peaks ranging to 11,000 feet. Mid-elevations are characterized by a diverse composite of open grasslands and extensive stands of lodgepole pine, Douglas-fir, Englemann spruce and sub-alpine fir.

The Forest is relatively undeveloped. Approximately 66 percent of the included lands remain unroaded or accessed only by jeep trails.

The Forest Supervisors Office is located in Dillon, with Ranger District offices in Dillon, Wise River, Wisdom, Sheridan and Ennis.

2. Social/Economic Background

The local population depends on the Forest for a variety of resources including livestock forage, timber, posts and poles, firewood, recreation (including hunting and fishing), and water for irrigation and domestic use. The Forest generates employment in the timber, mining and outfitting industries, and brings exterior dollars into the community from the tourist trade. For many people, a continued supply of these resources is essential to maintain their current lifestyle.

B. Resource Elements

The following discussion is intended to portray the management situation as it relates to specific resource elements and services. However, discussing these elements individually does not fully convey the interactions between them. For example, roads that transport sawlogs to the mill are also designed to provide access for hunting, firewood gathering, and other recreation. Timber harvest in an area can benefit livestock grazing by providing transitory range and can also improve wildlife habitat by enhancing habitat diversity. Resources discussed individually below are actually elements in a complex series of interactions collectively producing the total effect of resource management. The resources and services are described individually only to emphasize important aspects of the current situation in an organized framework.

1. Recreation

a. Management Situation

Interest is increasing in the recreation opportunities in the Forest and the surrounding area. Attractions such as the Anaconda-Pintler and Lee Metcalf Wilderness areas, excellent hunting and fishing, and the relatively primitive land character are drawing ever-increasing numbers of Forest visitors.

Recreation use is measured in Recreation Visitor Days (RVDs), equal to 12 hours of visitor use. The total estimated RVDs for the recreation use of the Forest is 495,800/year. This figure is based on 1980 Recreation Information Management (RIM) data.

In recent years, a sharp increase has been noted in the number of visitors coming from distant areas. This increase is partly attributable to the growing populations of nearby cities like Bozeman and Missoula. The remaining increase is attributable to the attractiveness of Beaverhead County, promotional campaigns to attract visitors, and better highway access to the area.

Since 1970, a significant increase has occurred in the total recreation use on the Forest. Use rates have also climbed sharply on lands in other ownerships. As a result, many private landowners who have traditionally accommodated the recreating public are closing their lands to such use especially during the fall hunting season. If this trend continues as expected, recreation use will increase on the public lands due to the displacement from private lands.

1) Dispersed Recreation

The Forest provides a wide range of dispersed recreation opportunities for the Forest visitor, including camping, fishing, hiking, backpacking, cross-country skiing, picnicking, pleasure driving, rock hunting, snowmobiling, and hunting.

Snowmobiling is rapidly growing in popularity because of the availability of extensive open areas, the dry snow conditions, and the clear winter weather. The Forest provides approximately 15 miles of groomed trail for public use with many opportunities for snowmobiling ungroomed trails and roads throughout the Forest.

The Forest provides excellent opportunities for ski touring in the winter months. Currently the Forest maintains approximately 30 miles of trails for public use. Ski touring is the fastest growing of all winter outdoor sports.

The Forest contains nearly 70 miles of designated National Recreation Trails and over 1,517 miles of maintained system trails. These trails are used for horseback riding, trail bike riding, back packing, and the movement of livestock. Many trails have restrictions limiting the type of use allowed.

2) Developed Recreation

The Forest maintains approximately 30 developed campgrounds, 4 picnic grounds and 5 boating sites. In addition, the Forest administers special use permits for 5 privately owned resorts, one organizational site, 12 recreation residence sites, and one winter downhill ski area.

The downhill ski area is located at Maverick Mountain in the upper Grasshopper drainage. Facilities include a double chair lift, a lodge, and parking lot. Additional ski developments are located at Deep Creek on BLM land near Wise River, Montana and at Lost Trail Pass on the Bitterroot National Forest west of Wisdom, Montana.

b. Need/Opportunity for Change

The Forest currently contains more overall receational potential than the estimated demand for the next fifty years; however, several opportunities exist to improve or enhance the quality of the recreational experience, and to provide a wider range of settings and experience types.

As the use of dispersed recreational activities increases, localized areas may become overused or degraded. Sanitary facilities and trail head facilities may need to be installed to ameliorate the impact. A public educational program encouraging low impact use could help avert future problems.

The Forest is currently encountering occasional distribution problems in existing developed sites. During peak use periods several more popular campgrounds become crowded while others remain only partially filled. Reconstruction and or continued maintenance of existing high use campgrounds is necessary to maintain current use levels without major resource degradation. A public informational program could help inform users of lesser used sites and result in a more managable distribution of use.

There is a significant opportunity to provide a greater number of dispersed and developed winter recreational opportunities. Expansion of the Maverick Mountain Ski Area or development of additional cross country ski and snowmobile trails is possible.

c. Supply Potential

The supply potential for total dispersed recreation is estimated at 1,780,000 RVDs per year. Management actions could change the type, amount and location of dispersed use activities through development of trailhead facilities and providing public access through private lands to the National Forest. However, due to the large amount of unroaded land located on the Forest the potential would remain essentially the same.

The supply potential of existing developed recreational facilities is 494,000 RVDs per year. Opportunities for increasing this potential recreation are great. Additional Forest Service investment could be used for the reconstruction of campgrounds and picnic areas. There is a large potential for the private sector to supply developed recreation on private lands adjacent to or inside the National Forest boundary.

d. Demand

Dispersed recreation use, based on 1980 RIM data, is approximately 304,800 RVDs per year. Dispersed recreation demand is expected to increase steadily to 438,700 RVDs within the next fifty years. The Forest is expected to be able to provide sufficient dispersed opportunities of all types above demand within that time period.

Developed Recreation use based on 1980 RIM date is approximately 179,000 RVDs per year on Forest managed sites. Another 12,000 RVDs of use occurs on sites administed by special use permits, such as the Maverick Mountain Ski Area. Developed recreation demand is expected to rise to 379,400 within the next five decades. Existing facilities are expected to be sufficient to handle the demand.

2. Wilderness

a. Management Situation

The Forest currently contains portions of two existing Wilderness areas collectively comprising approximately 173,500 acres.

The Anaconda-Pintler Wilderness is located in the northwestern part of the Forest. The entire Wilderness contains 157,874 acres, of which 72,526 acres are on the Beaverhead National Forest. The remaining acres are on the Bitterroot and Deerlodge National Forests.

The Lee Metcalf Wilderness is located in the eastern portion of the Forest and reaches from the northern end of the Madison Range, south over 30 miles to Quake Lake. The Wilderness comprises approximately 259,000 acres located on the Gallatin and Beaverhead National Forests. Approximately 101,000 acres are located on the Beaverhead.

b. Need/Opportunity for Change

There is a need in some wilderness areas to upgrade or improve maintenance of existing trails. In some areas use has been concentrated such that site damage has occured. These areas may require rehabilitation through investment or temporary closing of the site.

c. Supply Potential

A maximum level of wilderness would occur if all currently inventoried roadless areas were designated. This total of 1,246,000 acres plus the 173,500 acres of existing wilderness would comprize a wilderness total of 1,419,500 acres. Dispersed recreation potential of the two existing areas is estimated at 150,000 RVDs per year. Inclusion of more wilderness to the system would raise the potential commensurately.

d. Demand

Existing use in the Anaconda-Pintler Wilderness is approximately 21,000 RVDs per year. Use figures for the Lee Metcalf Wilderness are unknown due to its recent designation. Area capacity for the two existing areas is believed to be sufficient to meet demand for the next five decades.

3. Roadless Areas

a. Management Situation

The Forest currently identifies 1,246,000 of inventoried roadless area in addition to the two existing Wildernesses.

b. Need/Opportunity for Change

A decision must be made whether to retain these lands in their roadless state or release them for other resource uses. In many instances, development for other resource use would eventually destroy the roadless character of the land.

c. Supply Potential

The maximum level of roadless lands would occur if all currently roadless lands were managed to retained their roadless character.

d. Demand

The public has expressed considerable interest in retaining a number of currently roadless lands in a roadless status. These include areas in the West Pioneer Mountains, East Pioneer Mountains, Tobacco Roots, Snowcrest, Italian Peaks, and West Bighole.

4. Wildlife

a. Managment Situation

The Forest provides habitat for approximately 385 wildlife species. While maintenance of all species is of major importance, elk recieves the highest amount of public interest and levels of analysis.

The Montana Department of Fish, Wildlife, and Parks, estimates the current summer elk population on the Forest at approximately 12,200 head. Due to the great diversity of habitats on the Forest, summer range is not considered a limiting factor.

The Forest contributes approximately one-third of the total elk winter range utilized during a normal winter. The remainder is located on the Salmon, Bitterroot and Deerlodge National Forests, Bureau of Land Management, States of Idaho and Montana, and privately owned lands.

The Forest also provides habitat for an estimated 20,000 mule deer, 700 moose, 1,500 pronghorn antelope, 650 black bear, 485 mountain goats, 400 white tailed deer, 85 bighorn sheep, and 50 mountain lions. Habitat is also provided for a variety of fur bearers, small game, birds, and non-game species.

b. Need/Opportunity for Change.

Changes in wildlife habitat due to road construction, timber harvest, access or other management activities can affect the size and composition of elk populations. In some areas the loss of security cover on forested lands and increased access can lead to an overharvest of elk and a decrease in the percentage of branch antlered bulls. In other areas, there is a need to generate a greater diversity of species and age components in the ecosystems to provide available forage.

Other species of wildlife are affected by the same management activities. Management considerations should be responsive to the entire wildlife resource in a "holistic" manner.

c. Supply Potential

Benchmark analysis indicates that the maximum population of elk which can be sustained on the existing winter range is approximately 15,500. This number includes 7,500 on National Forest lands and the rest on private and adjoining lands.

Individual wildlife species are dependant on specific vegetative or successional stages such as old growth Douglas-fir or seral brush communities. To maintain viable populations of all wildlife species, a wide diversity of types is needed.

d. Demand

The Montana Department of Fish, Wildlife and Parks was contacted regarding an estimate of the reasonable number of elk that could be tolerated on the winter ranges. During severe winters elk are forced down onto private lands because of deep snow on the Forest. This concentration of animals causes conflicts with the private land owners.

The Department estimated the overall maximum tolerable number of wintering elk at approximately 11,650 head, including 7,500 on non-Forest winter range. Thus, approximately 4,150 elk is all the Forest portion of the winter range should attempt to carry to avoid a potentially serious range conflict with non-Forest ownerships. The difference between the summer population and the winter population occurs because the number of elk that migrate from the Beaverhead to the Salmon and Bitterroot National Forests exceeds the number that migrate from the Gallatin and Targhee, to the Beaverhead National Forest in the winter.

Other wildlife species are in demand for hunting, trapping, photographing or simply viewing.

5. Threatened and Endangered Species.

a. Management Situation

Two animal and two bird species currently or historically found on the Forest are listed Federally as threatened or endangered under the Endangered Species Act of 1973.

The endangered bald eagle nests in the southeast portion of the Gravelly Range and winters along the Red Rock, Ruby, Jefferson, Madison, Big Hole, and Beaverhead Rivers. There are currently three known active eagle nests on the Forest. Most migration and wintering activity occurs off-Forest adjacent to the large river valleys. A portion of the Ruby River Valley has been delineated as "essential" habitat for the bald eagle. The Forest is an active participant in the Greater Yellowstone Bald Eagle Management Plan.

The endangered peregrine falcon historically inhabited the Forest. At the present time there is no known occupied peregrine falcon habitat in the Forest. "Essential" unoccupied peregrine falcon habitat has been delineated in the southeast portion of the Gravelly Range. Currently the peregrine is being reintroduced into the Centennial Valley, off-Forest, south of the Gravelly Range.

The endangered gray wolf is an occasional visitor to portions of the Continental Divide southwest of Dillon. The sporadic wolf activity on the Forest is believed to consist of individual or pairs of wolves. No evidence of pack activity has been observed. The wolf populations are believed to be low, with the individual wolves utilizing a large geographic area, including portions of the Salmon National Forest. The Forest is an active participant in the Continental Divide Gray Wolf Coordination Plan.

The threatened grizzly bear is suspected of utilizing portions of the Madison Range within the Lee Metcalf Wilderness and is an occasional visitor to the Tobacco Root Mountains and the Gravelly Range. The Beaverhead National Forest does not include "occupied habitat" identified in the Greater Yellowstone Grizzly Bear Recovery Plan.

b. Need/Opportunity for Change

The Forest contains suitable peregrine falcon habitat in several locations. There is an opportunity to reintroduce peregrines back into the area.

Known bald eagle nest sites and habitat can be managed to maintain or enhance existing use.

Areas suspected of gray wolf activity can be managed to maintain existing prey bases and avoid conflicts with man through the use of area and road closures.

The Forest is not located within identified "occupied" Grizzly bear habitat; however, continued monitoring of actual or suspected use and evaluation of potential habitat is important in retaining future managment options.

6. Fisheries

a. Management Situation

Game fish species occurring on the Forest include cutthroat, rainbow, brown, golden, brook and rainbow-cutthroat hybrid trout, as well as arctic grayling, and mountain whitefish. There are no anadromous or threatened and endangered fish species occuring on the Forest; however, the State of Montana classifies the cutthroat and arctic grayling as "Species of Special Concern".

There are approximately 1,050 miles of fishable streams, and 155 lakes on the Forest providing 4,184 acres of habitat for an estimated 750,000 catchable trout.

Water quality and fish habitat are generally considered in good condition. Some streams in grazing allotments have been degraded due to the loss of cover and trampling of the stream bank. These conditions are expected to improve as allotments are managed under intensive grazing management systems developed through allotment management plans.

The Madison, Beaverhead, and Big Hole Rivers are classified as "Blue Ribbon" fishing streams of national significance. Many of the small tributaries on the Forest provide spawning and rearing habitat to these and other downstream fisheries and influence both the quality and quantity of water flowing into them.

b. Need/Opportunity for Change

The management of the riparian vegetation is important to maintaining fisheries habitat. This is particularly important within grazing allotments where use by livestock can damage fishery habitat.

c. Supply Potential

It is estimated that the biological potential of the stream and lake fisheries on the Forest is 906,000 catchable trout. This is an increase of approximately 20 percent over current populations. To achieve this level, investment in fisheries habitat improvement projects, and implementation of new livestock utilization standards in grazing allotments would need to be implemented.

It is estimated that the Forest has the potential of contributing 157,350 adult fish to the downstream fisheries. This figure could be increased through the same procedures described above.

d. Demand

Fishing use within the Forest under existing conditions is 45,454 RVDs per year. This use is expected to increase over time. The objectives identified in the Regional Guide are for 177,000 catchable fish in the year 2000. This figure is well below expected levels.

7. Range

a. Management Situation

The current permitted domestic livestock use on the Forest is approximately 190,000 Animal Unit Months (AUM's) per year. Approximately 2 percent of this total occurs as recreational use of transportation livestock. The majority of commercial use occurs on 574,000 acres of suitable range including 12,000 acres of transitory range grazed in the Big Hole Area. The average stocking level on the Forest is 3.02 acres per AUM. Including acreage in rest pastures, the actual stocking rate of the grazed areas is about 2.5 acres per AUM.

Currently, 216 permittees utilize 173 active grazing allotments on Forest lands. Cattle grazing permits vary in size from 7 to 1,477 head, with an average of approximately 178 head per permit. Sheep permits range from 1,350 to 4,000 head.

Approximately 75 percent of the grazing allotments are currently operating under an Allotment Management Plan (AMP). Currently, 32 percent of the suitable range is maintaining forage production in an upward trend, 51 percent is stable and 17 percent is declining. These figures are expected to improve as the remainder of the existing allotments are managed under AMP's.

b. Need/Opportunity for Change

There is a need to manage all grazing allotments under the guidance of an Allotment Management Plan (AMP). AMPs help control livestock use and over time should improve the condition of the existing range.

These is also a need for changing grazing practices along streams containing a fishery resource. Adequate vegetation must be left along stream banks to maintain bank stability and to provide shade and cover for fish.

c. Supply Potential

The Forest has the capacity to meet current livestock forage demands and has the potential to increase forage production through investments in range improvements, extensive and intensive management of permanent rangeland, and through the creation of transitory forage resulting from timber harvest.

Benchmark analysis indicates that the maximum potential livestock capacity in decade one is 231,000 AUMs per year. The majority of the increase would be generated as transitory range created through extensive timber harvest.

d. Demand

Current domestic livestock use on the Forest is 190,000 AUMs per year. Demand is expected to increase to the extent to which permitted use is made available. However, increases in grazing fees or changes in regulations affecting use of National Forest rangeland could decrease demand.

8. Timber

a. Management Situation

Forty percent of the Forest is classified as suitable timber land, capable of producing at least 20 cubic feet of commercial wood products per year. The majority of the commercial stands of timber are composed of lodgepole pine; however, lesser amounts of commercial Douglas-fir stands are found in the transition between the grasslands and the lodgepole pine. Stands of Engelmann spruce are found on many of the wetter sites. Subalpine fir, whitebark pine, limber pine, and alpine larch are found in the higher elevations but are not generally considered commercial due to low value, harsh environmental conditions, and low productivity.

Productivity on the Forest is considered low to moderate, ranging between 20 and 80 cubic feet per acre per year, with an estimated mean of approximately 35 cubic feet per acre per year (Pfister, 1977).

A large proportion of the Forest's existing timber stands exceed 100 years of age, and have a high incidence of insect and disease, including dwarf mistletoe in the lodgepole pine and spruce budworm in the Douglas-fir. A mountain pine beetle epidemic is currently centered in the Madison Valley, and is expected to spread to the remainder of the Forest in the next decade. The potential for high mortality in the lodgepole stands is great.

Total standing volume on the Forest is estimated at 8.0 billion board feet. Of the total number of trees on the Forest, 66 percent are lodgepole pine, 17 percent is Douglas-fir, and 6 percent are Engelmann spruce. The remainder is in smaller amounts of subalpine fir, whitebark pine, alpine larch, ponderosa pine and aspen.

b. Need/Opportunity for Change

Several opportunities exist to increase the timber productivity of the Forest.

Due to the relatively undeveloped condition of the Forest, the development of transportation systems into unroaded areas can increase the area available for timber management.

Many of the stands of timber on the Forest contain low volumes due to over-maturity, overstocking or mortality caused by past mountain pine beetle epidemics. Regeneration and management of these stands can increase future volumes significantly.

Past harvest on the Forest has occured mostly on slopes less than 45 percent. New technology in harvest systems could be used to utilize the timber resource on steep slopes. This could expand the area available for timber management.

Much of the Forest timber stands are in older age classes greater than 80 years. Through timber harvest, a greater diversity of age and size classes can be developed. This diversity is important in providing habitat for dependant wildlife species, and for averting future insect and disease problems.

c. Supply Potential

The long term sustained yield capacity of the Maximum Timber Benchmark is 22.7 MMCF (68.1 MMBF) with a first decade harvest of 19.8 MMCF (53.5 MMBF). This amount of harvest requires a suitable timber base of 804,200 acres.

d. Demand

Regulated timber offered for sale on the Forest has averaged 26 to 30 million board feet of timber per year since 1978. This figure exceeds the allowable sale quantity allowed in the 1978 Beaverhead Land Management Plan due to backlog volume accrued during the suspension of timber harvest during the past planning process. The volume of regulated timber offered and actually sold since 1978 is shown in the following Table VII-1.

Table VII-1 (Timber Sale Volume)

YEAR	MMBF OFFERED	SOLD LOCAL	SOLD OUT OF STATE	SOLD TOTAL
1978	26.6	26.6	0	26.6
1979	35.0	20.2	0	20.2
1980	23.8	11.6	8.1	19.7
1981	29.4	14.5	14.6	29.1
1982	26.3	20.1	0	20.1
1983	30.2	28.0	0	28.0

The Forest currently recieves bids for offered timber from mills in the Dillon, Bitterroot and Anaconda area, as well as some from Idaho. The East Zone Timber Program Analysis conducted by the Forest Service in 1978 estimates the total milling capacity of the mills in the local area at approximately 35.4 MMBF per year. The production potential of nonlocal mills is unknown.

9. Watershed and Soils

a. Management Situation

Generally, watershed conditions are good, and water quality is high on the Forest. Sedimentation is the major water quality variable affected by Forest management and use.

The Forest exhibits a wide array of parent materials and associated soils each having a unique set of management implications. Parent materials include granitic, volcanic, metamorphic, sedimentary, and belt series formations. Soils range from very shallow to deep and vary in physical and biological characteristics and productivity.

Erodibility and potential to deliver sediment to stream channels varies widely form one soil type and land type to another. Some exhibit high natural erodibility while others contain a high percentage of blocky fragments with low erodibility.

Disturbance associated with road construction, timber harvest and site preparation has the potential to cause adverse soil impacts on the Forest. The degree and duration of these impacts depend on the type and condition of soils and landscapes, the intensity of the management activity, the mitigation measures applied and unpredictable events such as high intensity storms or wildfire.

b. Need/Opportunity for Change

The current impact of management activities on water quality and sedimentation is unknown. Two resource impact models are available for predicting impacts: WET predicts the resulting hydrograph of a drainage following vegetation manipulation. This can be used to predict the possibility of damage to the stream channel during periods of peak flow, and to predict possible decreases in late season flow. The R1/R4 Sedimentation model can be used to predict sedimentation rates in managed watersheds. A companion model can be used to estimate the impact of the sedimentation on the fishery resource.

There is a need to monitor water quality on the Forest to evaluate current conditions, and to validate the predictibility of computer models.

c. Demand

The Forest annually provides approximately 2.5 million acre-feet of water to the Missouri River drainage. The quantity and quality of the water produced from Forest lands is important in maintaining the various uses of the water resource, such as irrigation and municipal watersheds, as well as the fishery resource.

10. Minerals

a. Management Situation

The Beaverhead National Forest contains significant mineral and energy resources. The location, identification, development, and production of these resources are expected to play an important role in the future of the area.

A wide variety of geologic environments, highly favorable for the occurrence of many mineral commodities, occur on the Forest. Past exploration and/or development has occurred for talc, molybdenum, tungsten, thorium, iron, gold, silver, copper, lead, zinc, silica, decorative stone, gypsum, and phosphate as well as others.

Significant potential for oil and gas exists across a large portion of the Forest in overthrust and foreland structures and within deep Tertiary basins. Portions of the Gravelly and Snowcrest Ranges, the Tendoy Mountains, and the Lima Peaks areas have very high geologic favorability for oil and gas.

Interest in oil and gas resources has been escalating rapidly. Prior to 1975 there were few oil and gas leases on the Forest. Between 1975 and August, 1979, 330 lease applications covering 633,930 acres were received. Since then the number of leases or applications has risen to 874 covering over 1.6 million acres (as of 4/1/84). Over 603 leases have now been issued with stipulations for environmental protection. Some lease applications have now been received for every part of the Forest.

Interest in geophysical (including seismic) exploration also is increasing rapidly. Seismic lines have totaled 100 miles or more in each of the last three years (1981-1983), and have involved many different oil companies. Geophysical (seismic) prospecting activity probably will be concentrated in the Tendoys to Lima Peaks areas, near Lima and Dell, and also in the Gravelly and Snowcrest Ranges, southeast of Ruby Reservoir. An oil and gas drillsite is currently being drilled in McKnight Canyon. Preliminary inquiries concerning drilling in the Gravelly and Snowcrest Ranges have been received, but drillsite applications have not been submitted.

b. Need/Opportunity for Change

It is expected that the Forest will experience an increase in exploration and development of mineral and energy resources in the future. It will be important to manage this use such that the value of the resource is realized while other resources are protected.

c. Supply Potential

The reserve base of locatable minerals on the Forest is very roughly estimated to be valued at 6.1 billion dollars. The reserve base is composed of medium to large deposits of molybdenum, tungsten, iron ore, metallurgical grade silica, and talc, and small deposits of gold, silver, copper, lead, and zinc. In order for the in-place value of a deposit to be included within the reserve base, that deposit must have identified grade, quality, thickness, and depth. It must be capable of being mined economically at the present time, or have reasonable potential for becoming economically available within a 50-year planning horizon.

The supply potential of the oil and gas resource on the Forest is unknown.

d. Demand

It is expected that the demand for exploration of mineral and energy on the Forest will increase over time. The demand for discovered resources will depend on the extent of discoveries and the current local, regional, national or world need.

11. Lands Program

a. Management Situation

The Forest administers 304 special use permits authorizing the use of 4,929 acres for such uses as ditches, dams, water sources, recreational occupancy, utilities, communication devices and approximately 222 miles of right-of-way.

The Forest currently maintains 34 special use permits for recreational residences. Several of these permits are planned for termination within the next twenty years. Six permits are currently issued for public resorts including a cabin-trailer park at the mouth of the West Fork of the Madison River, a marina on the Horn Creek Fork of Cliff Lake, two resorts at Wade and Elk Lake which provide cabin accommodations and boat rentals, a resort with lodge and cabin accommodations at Elkhorn Hot Springs, and a high country resort at Canyon Creek that provides cabin rentals, horse rentals, guided pack trips and outfitter-guide services. In addition, the Forest maintains a special use permit for the Maverick Mt. Ski Area.

b. Need/Opportunity for Change

The Forest is currently working to secure several road and trail rights-of-way to provide legal access to the Forest for resource development, as well as to provide public access.

The Forest is currently working to consummate several land exchanges that involve 330 acres of Federal lands and 267 acres of non-Federal lands. These exchanges are desired to resolve conflicts, or to provide for more efficient management of Forest lands.

c. Demand

Increases in recreational and developmental use of the Forest will increase the need for exterior access. Rights-of-way will be needed through private land to provide that access.

12. Facilities

a. Management Situation

The Forest road system comprises approximately 1,685 miles of existing road, including 585 miles of arterial and collector roads, and 1,100 miles of local roads. Of the total, approximately 950 miles are maintained and 735 remain in primitive condition. In addition, at least 2,500 miles of unmapped nonsystem "wheel tracks", and "jeep roads" exist.

Due to the gentle topography of much of the Forest, off-road vehicle use is common. This type of travel has become excessive in some areas, causing damage to the vegetation and soil erosion.

In many locations, public access is not available to Forest lands. The Forest plans to acquire access where it is deemed necessary to the accomplishment of management activities or to provide public recreational access.

The Forest contains approximately 1,587 miles of maintained trails. These trails are used for horseback riding, trail bike riding, back packing, and the movement of livestock. Many trails have restrictions limiting the type of use allowed.

The Continental Divide National Scenic Trail, recently approved by Congress, will follow along nearly 130 miles of the western edge of the Forest.

The Forest, in cooperation with other governmental agencies, participates in the development and implementation of the Southwestern Montana Inter-agency Visitor's Map. This Map provides the National Forest visitor (as well as the visitor to other public lands in the area) information about access opportunities and travel restrictions. Access opportunities and restrictions vary as to whether they apply on a seasonal or yearlong basis.

The Forest maintains a number of cabins and small administrative sites including barns and corrals. These sites are used as work centers during the summer months. Several cabins on the Forest are available for public recreational rental when not needed for Forest administrative use.

b. Need/Opportunity for Change

The construction and maintenance of the Forest road system improves opportunities for resource development including timber harvest, mineral development and ecosystem management.

Roading of currently undeveloped areas reduces the opportunity for primitive types of recreation but increases opportunities for roaded semiprimitive recreation.

Providing access to previously inaccessible portions of the Forest through right-of-way acquisition can increase opportunities for recreation and resource development.

Road, trail and area management, controlled through the Southwestern Montana Inter-agency Visitor's Map can be used to reduce impacts on wildlife populations, decrease sediment from Forest roads and trails and to reduce user conflicts.

c. Supply Potential

If current management direction were extended through the next decade, approximately 52 miles of road would be constructed per year on the Forest to support timber management activities. The maximum PNV alternative would require the construction of approximately 72 miles of road per year.

To provide full access to the exterior boundary of the Forest, access would be required at approximately 45 access points.

d. Demand

Road are needed to fully develop the timber resource on the Forest. All areas included in the suitable timber base will need access in the coming decades. All major arterial and collector systems should be in place within 50 years, with the completion of the entire system within 100 years.

Demand for exterior access to Forest lands will increase with increases in recreation demand. This is particularly important along the west face of the Lee Metcalf Wilderness where public access is very limited.

The Continental Divide National Scenic Trail, if approved, will extend along the western boundary of the Forest. Construction of some segments may be necessary to complete the system.

13. Protection

a. Management Situation

Wildfires and insect epidemics have played a major role in the development and present conditions on the Forest. These forces will continue to play an influential role in the dynamics of the Forest ecosystems.

Fire is an important and natural force in the development of healthy ecosystems on the Forest. Lodgepole pine ecosystems are dependant upon fire to regenerate stagnant, decadant and disease infected stands. Douglas-fir ecosystems are dependant upon fire to maintain encroachment areas in grassland vegetative communities and to provide browse in the understory. Sagebrush, grassland and willow ecosystems are dependant on periodic fire to maintain a diversity of plant age and species.

A great number of acres on the Forest burned in the years 1879 and 1889. These fires generated the extensive stands of 80 to 95-year old stands of lodgepole pine existing presently. Protection of the Forest from fire since the early 1900s has allowed Douglas-fir encroachment into grasslands, and allowed lodgepole pine stands to age to a condition of decadence. This has resulted in a reduction of forage available to domestic livestock and wildlife, and has increased the risk of large catastrophic fires.

Mountain pine beetle is the most serious insect problem on the Forest. The insect attacks stands of lodgepole pine as they become mature. Stands greater than 80 years old with average diameters over seven inches are most susceptible. Epidemics have occurred historically across the Forest in nearly all lodgepole pine types. A major infestation occurred in the Madison area in the late 1970s and continues to a lesser degree currently. Much of the remainder of the Forest contains conditions favorable to the beetle, and further outbreaks are expected in the near future. The probability of major mortality is great in many areas.

Western spruce budworm has attacked many of the Douglar-fir stands on the Forest. The insect has caused mortality of some smaller trees; however, the major impacts are top kill and up to 50 percent reduction of growth in the infested trees (Fauss, 1969).

Dwarf mistletoe is common in the lodgepole pine stands on the Forest. The parasite causes deformity in the affected trees and a loss of growth.

b. Need/Opportunity for Change

During the 1930s, the a mountain pine beetle epidemic killed many of the larger diameter lodgepole pine over extensive areas of the Big Hole area. Many of these dead trees have now fallen and create heavy fuel concentrations that present an extreme risk of intense wild fire during dry weather conditions. Timber management and road construction can provide access to susceptible areas, and provide fuel breaks.

Due to the virtual exclusion of fire from the ecosystems, very little of the Forest is retained in age classes between 0 and 85 years. This includes both forested and non-forested types. Diversity of age classes is important to provide forage and habitat for livestock and wildlife and to maintain ecosystems in a healthy condition. Prescribed fire can be used under controlled conditions to develop the needed diversity.

Prescribed burning can also be used to reduce activity fuels and prepare sites for natural regeneration or planting following timber harvest.

Mountain pine beetle can be controlled in the long run through management of the suitable timber base. Harvesting stands before they become highly susceptible and developing a diversity of stands with different age, size and species effectively controls mortality.

Western spruce budworm can be effectively controlled using aerial spraying of controlling chemicals but is not considered economical in the Region at this time. In the long term, damage can be minimized by developing single storied vigorous stands of host species.

Dwarf mistletoe can be controlled by harvesting existing infected stands and controlling infection through thinning in regenerated stands.

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CHAPTER VIII

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GLOSSARY

A

ACRE-EQUIVALENT	A unit of habitat output related to fish or wildlife habitat improvement projects. Acre equivalents are based on the number of acres of habitat that are influenced by one habitat acre actually modified by the habitat improvement project. For example, an acre of winter range actually burned is credited with influencing 4 acres of summer range.
ACRE-FOOT	A measure of water or sediment volume equal to the amount which would cover an area of 1 acre to a depth of 1 foot (325,851 gallons or 43,560 cubic feet).
ACTIVITY FUELS	Logging debris generated from any activity on the Forest such as firewood gathering, precommercial thinning, timber harvesting, and road construction, which increases the potential for wild fire.
ADMINISTRATIVE SITE	Those facilities, such as Ranger Stations, work centers and cabins, which are used by the Forest Service in the management of the National Forest.
AIRSHED	Geographic areas in which air quality is managed.
ALLOWABLE SALE QUANTITY (ASQ)	The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."
AMENITY VALUE	Typically used in land-use planning to describe the resource properties for which market values (or proxy values) are not or cannot be established.
ANIMAL UNIT MONTH (AUM)	The quantity of forage required by one mature cow (1,000 lbs.) or the equivalent for one month.
APPROPRIATED FUNDING	Annual funding appropriated by Congress to the Forest Service and disaggregated to individual units for use in various funtional areas.
AUM	See animal unit month.

B

BASELINE	With respect to soils, the amount of erosion and sedimentation due to natural sources in the absence of human activity.

BASE TIMBER HARVEST SCHEDULE (BASE SALE) SCHEDULE)	A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade and this planned sale and harvest is not greater than the long-term sustained yield capacity.
BEST MANAGEMENT PRACTICES (Bmp's)	The set of standards in the Forest Plan which, when applied during implementation of a project, ensures that water related beneficial uses are protected and that State water quality standards are met. Bmp's can take several forms. Some are defined by State regulation or memoranda of undestanding between the Forest Service and the States. Others are defined by the Forest interdisciplinary planning team for application Forest-wide. Both of these kinds of bmp's are included in the Forest Plan as Forest-wide Standards. A third kind are identified by the interdisciplinary team for application to specific management areas; these are included as Management Area Standards in the appropriate management areas. A fourth kind, project level bmp's are based on site specific evaluation, and represent the most effective and practicable means of accomplishing the water quality and other goals of the specific area involved in the project. These project level bmp's can either supplement or replace the Forest Plan standards for specific projects.
BIOLOGICAL EVALUATION	An assessment required by the Endangered Species Act of 1973 to identify any endangered species which is likely to be affected by a proposed management action.
BOARD FOOT	A unit of measurement represented by a board one foot square and one inch thick.
BROADCAST BURN	Allowing a controlled fire to burn over a designated area within well-defined boundaries, for reduction of fuel hazard, as a silvicultural treatment, or both.
BOARD FOOT/ CUBIC FOOT CONVERSION	Both board foot and cubic foot volumes can be determined for timber stands. The number of board feet per cubic foot of volume varies with tree species, diameter, height, and form factors.

C

CAPABILITY AREA	A geographic delineation used to describe characteristics of the land and resources in integrated Forest planning. Capability areas may be synonomous with ecological land units, ecosystems or land response units.
CAPITAL INVESTMENT	Investment in facilities such as roads and structures with specially-appropriated funds.

CFR	Code of Federal Regulations.
CLEARCUTTING	Harvesting of all trees in one cut. It prepares the area for a new, even-aged stand. The area harvested may be a patch, stand, or strip large enough to be mapped or recorded as separate age class in planning. Regeneration is obtained through natural seeding, or through planting or direct seeding.
CMAI	See Culmination of Mean Annual Increment.
COLLECTOR ROADS	Roads constructed to serve two or more elements but which do not fit into the other two road categories (arterial or local). Construction costs of these facilities are prorated to the respective element served. These roads serve smaller land areas and are usually connected to a Forest arterial or public highway. They collect traffic from local Forest roads or terminal facilities. The location and standard are influenced by both long term multi-resource service needs and travel efficiency. Forest collector roads are operated for constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.
CONDITION CLASS	Description of the existing tree vegetation as it relates to size, stocking density, and age.
CONFINE	A fire suppression strategy which requires that the fire be restricted within determined boundaries established either prior to the fire, during the fire, or in an escaped fire situation analysis.
CONSTRAINT	A confinement or restriction on the range of permissible choices.
CONTAIN	A fire suppression strategy which requires that the fire and any spot fires therefrom be surrounded with a control line as needed, which can reasonable be expected to check the fire's spread under prevailing and predicted conditions.
CONTROL	To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that can reasonable be expected to hold under foreseeable conditions.
CORRIDOR	A linear strip of land which has ecological, technical, economic, social, or similar advantages over other areas for the present or future location of transportation or utility routes.
CRITICAL HABITAT	Key land areas used by wildlife for forage and reproduction, including wallows, licks, meadows, parks, critical hiding cover, thermal cover, migration routes and staging areas.

CRITICAL HIDING COVER	Hiding cover which is located in areas of high elk use in the fall. These areas are identified by the concentration of animals, numerous pellet groups, or other signs of heavy use. If the cover associated with these critical security areas is significantly altered, it may result in a reduction of elk use over a larger habitat area and may adversely affect herd productivity.
CUBIC FOOT	The amount of timber equivalent to a piece of wood 1 foot by 1 foot by 1 foot.
CUBIC YARD	A measure of soil or sediment volume which would cover a square yard of area, one yard deep.(3 feet x 3 feet x 3 feet)
CULMINATION OF MEAN ANNUAL INCREMENT (CMAI)	The age of a stand at which the current annual cubic foot volume growth is equal to the average annual cubic foot volume growth. This is generally considered the optimal harvest age for maximum timber production over time.
CULTURAL RESOURCES	The physical remains of human activity (artifacts, ruins, burial mounts, petroglyphs, etc.) and conceptual content or context (as a setting for legendary, historic, or prehistoric events as a sacred area of native peoples, etc.) of an area.
CUMULATIVE EFFECTS FEASIBILITY ANALYSIS	An analysis conducted prior to management activities when those activities have the potential to affect soil and water resources. The analysis predicts the potential for sedimentation of the stream channel, changes in the amount and timing of water runnoff, and the potential effect on other resources such as fisheries resulting from the management activities. The analysis is completed for on-forest activities only, and based solely on those activities whch have predictable and measurable effects.

D

DEFERRED GRAZING SYSTEM	A grazing system where all pastures within an allotment are utilized during a given year but some are deferred during all or part of a season to allow for nutrient storage or seed production.
DEVELOPED RECREATION	Recreation that occurs where improvements enhance recreation opportunities and accommodate intensive recreation activities in a defined area.
DIAMETER BREAST HEIGHT (DBH)	The diameter of a tree measured 4 1/2 feet above the ground.
DISPERSED RECREATION	That portion of outdoor recreation use which occurs outside of developed sites in the unroaded and roaded Forest environment i.e., hunting, backpacking and berry picking.

DIVERSITY	The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

E

ECOSYSTEM	A complete, interacting system of organisms considered together with their environment (for example; a marsh, a watershed, or a lake.)
ELK HIDING COVER	Vegetation, primarily trees, capable of hiding 90 percent of an elk seen from a distance of 200 feet or less.
ELK SECURITY COVER (EFFECTIVE ELK SECURITY COVER)	Elk hiding cover modified by open roads. The greater the density of open roads within an area, the less effective The figure is calculated by determining the needs of the elk, the amount of available cover, and the effect of open roads on the effectiveness of that cover.
ENDANGERED SPECIES	Plant or animal species identified by the secretary of Interior as endangered in accordance with the 1973 Endangered Species act.
EPHEMERAL STREAMS	Streams that flow only as a direct response to rainfall or snowmelt events. They have no baseflow.
EVEN-AGED MANAGEMENT	The application of a combination of actions that result in the creation of stands in which trees of essentially the same age grow together. Managed even-aged Forests are characterized by a distribution of the stands of varying ages (and, therefore, tree sizes) throughout the Forest area. The difference in ages between trees forming the main canopy level of the stand does not usually exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Cutting methods include: Clearcutting: The removal, in a single cut, of all trees in stands larger than seedlings. Shelterwood Cutting: The removal of all trees in a series of two or more cuts over a period of not more than 20 years. Seed Tree Cutting: Similar to clearcutting, except that a few of the better trees of the desired species are left scattered over the area to provide seed for regeneration. Residual seed trees may be removed from the site after regeneration has been established.

F

FORAGE	All browse and nonwoody plants available to livestock or wildlife for feed.
FORPLAN	A linear programming system used for developing and analyzing Forest planning alternatives.
FOREST SYSTEM ROADS	Roads that are part of the Forest development transportation system, which includes all existing and planned roads, as well as other special and terminal facilities designated as Forest development transportation facilities.
FSH	Forest Service Handbook
FSM	Forest Service Manual
FUELS	Include both living plants and dead, woody vegetation that are capable of burning.

G

GROUP SELECTION CUTTING	A modification of the selection system in which small groups of trees are removed from a stand over a period of time. Group selection harvest units generally do not exceed five acres in size.

H

HABITAT TYPE	An aggregation of all land areas potentially capable of producing similar plant communities at climax.
HIDING COVER	Trees of sufficient size and density to conceal animals from view at 300 feet.
HYDROLOGIC RECOVERY	The process of revegetation of a disturbed area which returns the site to pre-disturbance levels of water runnoff and timing of flow.

I

INDICATOR SPECIES	Species identified in a planning process that are used to monitor the effects of planned management activities on viable populations of wildlife and fish including those that are socially or economically important.
INVENTORIED ROADLESS AREAS	Those lands identified as roadless in the RARE II evaluation updated for the effects of recent management if any.

K

KEY WILDLIFE HABITAT COMPONENTS	Areas or features of the forest which are of particular importance for maintaining overall wildlife habitat. These areas and features include; moist areas, wallows, meadows, parks, critical hiding cover, thermal cover, migration routes and staging areas.
KV FUNDING	Monies collected as a percentage of timber sale reciepts in accordance with the Knutson/Vandenberg Act of 1930 to be used on timber sale areas for cultural and betterment practices such as planting, thinning and wildlife habitat management.

L

LANDTYPE	An area of land classified on the basis of geomorphic attributes. An understanding of geologic processes (as reflected in land surface form and features), individual kinds of soil, and the factors which determine the behavior of ecosystems (i.e., climate, vegetation, relief, parent materials, and time) is used as the basis of this classification system.
LOCAL ROADS	Roads constructed and maintained for, and frequented by, the activities of a given resource element. Some use may be made by other element activities, but normally maintenance is not affected by such use. These roads connect terminal facilities with Forest collector or Forest arterial roads or public highways. The location and standard, usually are determined by the requirement of a specific resource activity rather than by travel efficiency. Forest local roads may be developed and operated for constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.
LONG-TERM SUSTAINED YIELD (LTSY)	The highest uniform wood yield from lands being managed for timber production that may be achieved and sustained under a specified intensity of management, consistent with multiple use objectives.

M

M	Thousand
MM	Million
MAUM	Thousand Animal Unit Months.
MBF	Thousand Board Feet
MMBF	Million Board feet

MMCF	Million Cubic feet
MANAGEMENT AREA	An aggregation of capability areas which have common management direction and may be noncontiguous in the Forest. Consists of a grouping of capability areas selected through evaluation procedures and used to locate decisions and resolve issues and concerns.
MANAGEMENT CONCERN	An issue, problem, or a condition which constrains the range of management practices identified by the Forest Service in the planning process.
MANAGEMENT EMPHASIS	A management practice or combination of management practices designed to stress production of a particular type of output or mix of outputs.
MANAGEMENT INTENSITY	A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.
MANAGEMENT PRESCRIPTION	Management practices and intensities selected and scheduled for application on a specific area to attain multiple use and other goals and objectives.
MATURE TIMBER	Stands of trees which have achieved or exceeded culmination of mean annual increment.
MEAN ANNUAL INCREMENT	The total increase in girth, diameter, basal area, height, or volume of individual trees or a stand up to a given age divided by that age.
MINERAL ENTRY	The filing of a mining claim for public land to obtain the right to any minerals it may contain.
MINERAL WITHDRAWAL	The exclusion of the right of possession of locatable mineral deposits by the locator on areas required for administrative sites by the Forest Service and other areas highly valued by the public.
MINERAL EXPLORATION	The search for valuable minerals on lands open to mineral entry.
MINERAL PRODUCTION	Extraction of mineral deposits.
MINERALS, COMMON	Common rock, gravel, and sand deposits used generally for road construction and maintenance.
MINERALS, LEASABLE	Coal, oil, gas, phosphate, sodium, potassium, oil shale, sulpher (in Louisiana and New Mexico), and geothermal steam.
MINERALS, LOCATABLE	Those hardrock minerals which are mined and processed for the recovery of the minerals, often metallic. May include certain nonmetallic minerals and uncommon varieties of mineral

	materials such as valuable and distinctive deposits of limestone and silica. May include any solid, natural inorganic substance occurring in the crust of the earth, except for the common varieties of mineral materials and leasable minerals.
MINIMUM MANAGEMENT REQUIREMENTS	Standards for resource protection, vegetative manipulation, silvicultural practices, even-aged management, riparian areas, soil and water and diversity, to be met in accomplishing National Forest System goals and objectives (see 36 CFR 219.27).
MITIGATION	Avoiding or minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact by preservation and maintenance operations during the life of the action.
MODIFICATION (VQO)	See Visual Quality, Objective (VQO)
MONTANA WILDERNESS STUDY ACT AREAS	Those areas that are required to be studied for their wilderness suitability under the Montana Wilderness Study Act of 1978 (Public Law 95-1950).
MULTIPLE USE	The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

N

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)	An act which encourages productive and enjoyable harmony between man and his environment; promotes efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enriches the understanding of the ecological systems and natural resources important to the Nation; and establishes a Council on Environmental Quality.
NATIONAL FOREST LANDSCAPE MANAGEMENT SYSTEM	The planning and design of the visual aspects of multiple use land management to maintain or upgrade the visual quality of the landscape.

NATIONAL FOREST MANAGEMENT ACT (NFMA)	A law passed in 1976 as amendments to the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest plans and the preparation of regulations to guide that development.
NATIONAL RECREATION TRAILS	Trails designated by the Secretary of the Interior or the Secretary of Agriculture as part of the national system of trails authorized by the National Trails System Act. National recreation trails provide a variety of outdoor recreation uses in or reasonably accessible to urban areas.
NATIONAL REGISTER OF HISTORIC PLACES	A listing maintained by the National Park Service of areas which have been designated as being of historical significance. The Register includes places of local and State significance as well as those of value to the Nation as a whole.
NDSY	See nondeclining sustained yield.
NEPA	See National Environmental Policy Act.
NFMA	See National Forest Management Act.
NONCONSUMPTIVE USE	Those uses of resources that do not reduce the supply. For example: Nonconsumptive uses of water include hydroelectric power generation, boating, swimming, etc.
NONGAME	Species of animals which are not managed as a sport hunting resource.
NONSTOCKED	Deforested land where woody vegetation is less than 15 feet tall and produces less than 40 percent crown cover as determined by aerial photogrammetry.
NOTICE OF INTENT	A document filed with the appropriate District Ranger by any person proposing to conduct mining operations which might cause disturbance of surface resources.

O

OBJECTIVE	A specified statement of measurable results to be achieved within a stated time preiod. Objectives reflect alternative mixes of all outputs or achievements which can be attained at a given budget level. Objectives may be expressed as a range of outputs.
OCCUPIED HABITAT	Refers to those areas officially designated by the Greater Yellowstone Grizzly Bear Recovery Plan as occupied by the bear.
OFF-ROAD VEHICLE	Any vehicle capable of being operated off an established road or trail, e.g., motorbikes, four-wheel drives, and snowmobiles.

OLD GROWTH TIMBER	A stand of trees that is past full maturity and showing decadence; the last stage in Forest succession.
OPERATIONS PLAN	A written plan describing mining and mineral processing activities that will likely cause a significant disturbance of surface requirements. Approved by a Forest officer, the plan is prepared by those engaged in Forest mining activities, such as prospecting or exploration.
OPPORTUNITY COST	An opportunity cost is value foregone. In this analysis it is a cost calculated as the difference between present net value of the alternative and the present net value of the maximum PNV increment. Opportunity costs may be only a partial measure of foregone PNV or present net benefits.
OVERMATURE TIMBER	Trees that have attained full development, particularly in height, and are declining in vigor, health, and soundness.
OVERSTORY	The tallest component of a forest stand which usually dominates the competition for sunlight and available nutrients.
OVERTHRUST BELT	A narrow zone, extending from Alaska to Mexico, which resulted from compressional stresses within the earth, and which is characterized by abundant large thrust faults. This zone passes through and includes all of western Montana.

P

PARTIAL RETENTION (VQO)	See Visual Quality Objective (VQO)
PATENTED MINING CLAIMS	A patent is a document which conveys title to land. When patented, a mining claim becomes private property and is land over which the United States has no property rights, except as may be reserved in the patent. After a mining claim is patented, the owner does not have to comply with requirements of the General Mining Law or implementing regulations.
PERENNIEL STREAMS	Streams that flow continuously throughout most years.
PERMITTED GRAZING	Use of a National Forest range allotment under the terms of a grazing permit.
PLANNING AREA	The area of the National Forest System covered by a Regional or Forest Plan.
PLANNING HORIZON	The overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions which would influence the planning decisions. In the National Forest planning process, this is 150 years.

PLANNING PERIOD	A time interval for which inputs and outputs are identified in a planning process. Current RPA and National Forest Plan intervals are 5 and 10 years, respectively.
PLANNING RECORDS	Documents and files that contain detailed information and decisions made in developing the Forest Plan. Available at the Forest Supervisor's Office.
PLANNING UNITS	The Forest is divided into seven relatively discontiguous geographic areas. These divisions were used in the analysis process to estimate outputs and effects. The seven Planning Units are as follows: 1. West Bighole 2. Pioneer 3. Fleecer 4. Tobacco Root 5. Lima 6. Gravelly 7. Madison
PLAN OF OPERATION	A document filed with the appropriate District Ranger prior to all mining operations that are likely to cause significant disturbance of surface resources.
POLETIMBER TREES	Live trees of commercial species at least five inches in diameter at breast height but smaller than sawtimber size, and of good form and vigor.
POTENTIALLY (TENTATIVELY) SUITABLE LAND	Forest land (as defined in CFR 219.3) for which technology is available that ensures timber production without irreversible resource damage to soils, productivity, or watershed conditions; for which there is reasonable assurance that such lands can be restocked (CFR 219.14); and which is available for timber management.
PRECOMMERCIAL THINNING	The selective felling, deadening, or removal of trees in a young stand primarily to accelerate diameter increment on the remaining stems, maintain a specific stocking, stand density or species composition, and improve the vigor and quality of the trees that remain.
PRESCRIBED BURNING	The intentional application of fire to wildland fuels in either their natural or modified state under such conditions as allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to further certain planned objectives (i.e., silviculture, wildlife management, etc.)
PRESCRIBED FIRE	A fire burning under specified conditions which will accomplish planned objectives in strict compliance with an approved plan and the conditions under which the burning takes place and the expected results are specific, predictable, and measurable.

PRESCRIPTION	See Management Prescription.
PRESENT NET VALUE (PNV)	The difference between the discounted value (benefits) of all outputs to which monetary value or established market prices are assigned and the total discounted costs of managing the planning area.
PRESERVATION (VQO)	See Visual Quality Objectives (VQO)
PRIMITIVE RECREATION SETTING	A classification of the recreation opportunity spectrum that characterizes an essentially unmodified natural of a size or remoteness that provide significant opportunity for isolation from the signs and sounds of man and a feeling of vastness of scale. Visitors have opportunity to be part of the natural environment, encounter a high degree of challenge and use a maximum of outdoor skills but have minimum opportunity for social interaction.
PRODUCTIVITY	See Site Productivity.
PUBLIC ACCESS	Usually refers to a road or trail route over which a public agency claims a right-of-way available for public use.
PUBLIC INVOLVEMENT	A Forest Service process designed to broaden the information based upon which agency decisions are made by (1) Informing the public about Forest Service activities, plans, and decisions, and (2)Encouraging public understanding about and participation in the planning processes which lead to final decision making.
PUBLIC ISSUE	A subject or question of widespread public interest identified through public participation relating to management of National Forest System lands.

R

RANGE ALLOTMENT	A designated area of land available for livestock grazing upon which a specified number and kind of livestock may be grazed under a range allotment management plan. It is the basic land unit used to facilitate management of the range resource on National Forest System and associated lands administered by the Forest Service.
RANGE, TRANSITORY	See Transitory range.
RANGELAND	Land on which the climax vegetation (potential natural plant community) is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing and browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundra and certain forb and shrub communities. It also includes areas

	seeded to native or adapted introduced species that are managed like native vegetation.
RARE II	See Roadless Area Review and Evaluation II.
RECEIPTS	Money collected from timber stumpage, livestock grazing, campgrounds, special use permits, and returned to the federal government.
RECORD OF DECISION	A document separate from but associated with an environmental impact statement that publicly and officially discloses the responsible official's decision on the proposed action.
RECREATION INFORMATION MANAGEMENT (RIM)	The Forest Service system for recording recreation facility condition and use.
RECREATION MANAGEMENT AREA	An area of several thousand acres in which the management emphasis is on recreation and in which direction is given to establish a Recreation Area Management Plan.
RECREATION OPPORTUNITY SPECTRUM (ROS)	A system for planning and managing recreation resources that recognizes recreation activity opportunity, recreation setting opportunity, and recreation experience opportunity along a spectrum or continuum.
ROS CLASSES	Primitive (PRIM) Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other area users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Motorized use within the area is not permitted. Semi-Primitive Non-Motorized (SPNM) Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted. Semi-Primitive Motorized (SPM) Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted. Roaded Natural Appearing (RNA) Area is characterized by predominantly natual appearing environment with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization

practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in the construction standards and design of facilities.

Roaded Modified (RM) Area is characterized by substantially modifed natural environment where evidence of man's activities are readily apparent. Such activities are usually resource-based (as opposed to "Rural", where man's activities may not necessarily be directly resource-related). Typical activities include timber harvest, mineral extraction, and livestock grazing. Such evidences may or may not harmonize with the natural environment. Interaction between users may be low to moderate, but evidence of other users prevails. Resource modification and utilization practices are readily evident and may dominate. Conventional motorized use is provided for in the construction standards and design of facilities.

Rural (R) Area is characterized by substantially modified natural environment. Resource modification and utilization practices are primarily to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of man are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and praking are available.

RECREATION TYPES

A term used in this EIS to indicate the type of recreation experience sought by Forest users. They are overlapping portions of the total recreation preferences spectrum that the public may express demands for.

Type I - Orientations toward using the natural, unmodified environment for the appreciation and understanding of natural phenomena; as a source of intelletual and/or physical challenges; for seeking solitude; and for esthetic stimulations.

Type II - Orientations toward using a natural or semiprivate environment in searching for and extraction of indigenous fish and/or game species, rocks, minerals, edible plants, etc., and for enjoyment of the physical surroundings in which such extractable objects are found.

Type III - Orientations toward using semipimitive, lightly developed areas for relaxing in natural surroundings; as a source of tranquility and freedom from tension; and for esthetic stimulation.

Type IV - Orientations toward using moderately developed areas and the surrounding environment for intentional social interaction and group learning experiences.

	Type V - Orientations toward using highly developed areas for social interactions with many other people and for pursuits which allow for the expression of learned physical abilities.
RECREATION VISITOR DAY (RVD)	One visitor day equals 12 hours (one person for 12 hours, or 12 people for 1 hour, or any combination thereof).
REDUCED SERVICE MANAGEMENT	Management of developed recreation facilities below established maintenance standards.
REFORESTATION	The renewal of forest cover by seeding, planting, and natural means.
REGENERATION	The renewal of a tree crop, whether by natural or artificial means.
REGIONAL GUIDE	A document developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and established management standards and guidelines for National Forest System lands of a given Region to the Forests within a given Region. It also disaggregates the RPA objectives assigned to the Region to the Forests within that Region.
REGULATED	The commercial forest land that is organized for timber production under the principle of sustained yield. The harvest of timber from this land is regulated to achieve multiple long range objectives, such as maintaining setting for recreational activities, rotating forage production areas and wildlife habitat, increasing water production yield, and increasing the growth and utilization of timber for the Nation's supply.
RESEARCH NATURAL AREA	An area in as near a natural condition as possible, which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and acquatic features. The area is set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes; commercial and general public use is not allowed.
REST ROTATION GRAZING SYSTEM	A grazing system in which some pastures within the allotment are deferred from grazing by livestock for an entire year. All pastures are deferred within the specified rotation of years.
RETENTION (VQO)	See Visual Quality Objectives (VQO).
RIGHT-OF-WAY	Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project facility passing over, upon, under, or through such land.

RIPARIAN AREAS	An area with distinctive resource values and characteristics that is comprised of an aquatic ecosystem, a riparian ecosystem, and adjacent upland areas that have direct effects on the riparian and aquatic ecosystems. This includes floodplains, wetlands, and all areas within a horizontal distance of approximately 100 feet from the normal high water line of a stream channel, or from the shoreline of a standing body of water.
ROAD	The administrative decision on the location and timing of road and trail closures.
ROADLESS AREA	Undeveloped Federal land within which there are no improved roads or roads maintained for travel by means of motorized vehicles intended for highway use.
ROADLESS AREA REVIEW AND EVALUATION (RARE) II	The assessment of "primitive" areas within the National Forests as potential wilderness areas as required by the Wilderness Act. This refers to the second such assessment which was documented in the final environmental impact statement of the Roadless Area Review and Evaluation, January 1979.
ROTATION	The planned number of years between the formation or generation of trees and their harvest at a specified stage of maturity.
RPA	See Forest and Rangeland Renewable Resources Planning Act.

S

SAWTIMBER	Trees containing at least one 12-foot sawlog or two noncontiguous 8-foot logs, and meeting regional specifications for freedom from defect. Softwood trees must be at least 9 inches in diameter and hardwood trees 11 inches in diameter at breast height.
SEDIMENT	Solid material, both mineral and organic, that is in suspension, being transported, or has been moved from its site of origin by air, water, gravity, or ice.
SEEDLING/ SAPLING	A forest successional stage in which trees less than 5 inches in diameter are the predominant vegetation.
SEISMIC EXPLORATION	Seismic exploration is used to map underground geological features to obtain more reliable information on the earth's subsurface and to localize areas where accumulations of oil and gas might occur. Seimic waves, generated at or near the surface, penetrate the earth's crust and reflect from subsurface rock layers back to the surface. The geophysicist receives a printed record or seismograph from which is measured the depth to various strata and from which subsurface structures with a potential for oil

and gas accumulation can be determined such as faults, anticlines, and folds.

Portable - Where access limitations, topography, or other restraints prevent use of trucks, portable operations can be performed. Two portable techniques exist for collecting data. These are:

(1) Surface charge programs involve the detonation of a series of as much as 50 to 100 pounds of explosives at shot points located at intervals along the seismic line. Surface charges can be placed directly on the ground, on snow, or on a variety of stakes or platforms. All necessary equipment to conduct the operation is transported by helicopters and then conveyed by foot travel.

(2) Various kinds of portable drills can be backpacked or delivered by helicopter to the area. A shallow subsurface portable program would involve drilling a pattern of approximately 16 holes about 4 inches in diameter up to 50 feet deep per mile of line. At this depth, a 10 to 40 pound charge of explosive is placed and detonated. Recording cables and geophones are laid out by foot travel.

With both of these portable techniques, shock waves generated by detonation are received and transmitted via geophones and cable to a recording device. Portable methods are generally used on the Forest.

Conventional - The conventional method of collecting seismic data includes the use of truck-mounted drills and vehicle-supported crews and generally involves off-road travel. This technique involves drilling 5 to 18 5-inch diameter holes per mile to a depth of 180 to 200 feet. At this depth, a 10 to 100 pound explosive charge is placed and detonated. Shock waves are received and transmitted via geophones and cable to a truck-mounted recording device. Due to terrain restrictions, this method has limited application on the Forest.

Vibroseis - The vibroseis technique involves using truck-mounted hydraulic pads which generate energy waves through vibration rather than explosives. The vibrator method typically consists of four large trucks each equipped with a vibrator (a steel slab weighing about three tons) mounted between the front and back wheels. The vibrator pads (about 4 feet square) are lowered to the ground and vibrators on all trucks are triggered electronically from the recorder truck. Energy waves are received and transmitted via cable and geophones to a recorder truck. After the information is recorded, the trucks move forward a short distance and the process is repeated. The vibroseis operation is usually limited to roads and gentle terrain.

	Gravity - Gravity surveys generally involve vehicle-supported operations in which gravity-density variations are measured by use of surface instruments. These surveys are also usually limited to roads and gentle terrain.
SELECTION HARVEST	The annual or periodic removal of trees (particularly mature trees), individually or in small groups, from an uneven-aged forest in order to realize the yield and establish a new crop of irregular constitution.
SEMI-PRIMITIVE RECREATION SETTING	A classification of recreation opportunity spectrum that characterizes a predominately natural or natural appearing environment of a moderate to large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum onsite controls and restrictions may be present, but are subtle.
SERAL	A biotic community which is developmental; a transitory stage in an ecologic succession toward climax.
SHELTERWOOD CUTTING	Designed to establish a new crop under a remaining portion of the old stand, providing both a seed source and protection of the site and seedlings.
SILVICULTURE	The art and science of growing and tending forest trees.
SILVICULTURAL EXAMINATION	The process used to gather the detailed in-place field data needed to determine management opportunities and direction for the timber resource within a small subdivision of a forest area such as a stand.
SILVICULTURAL SYSTEMS	A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. It includes all cultural management practices performed during the life of the stand such as regeneration cutting, fertilization thinning, improvement cutting, and use of genetically improved tree seeds and seedlings to achieve multiple resource benefits. Systems are classified according to the method of carrying out the fellings that remove the mature crop and provide for regeneration and according to the type of Forest they produce.
SITE PREPARATION	A general term for removing unwanted vegetation, slash, and even roots and stones from a site before reforestation.
SITE PRODUCTIVITY	Production capability of specific areas of land. On forested lands is generally expressed in cubic feet per acre per year of mechantable wood products.
SLASH	The residue left on the ground after felling and other silvicultural operations and/or accumulating there as a result of storm, fire, girdling, or poisoning.
SMALL GAME	Birds and small mammals permitted for hunting or trapping.

SPECIAL-USE PERMIT	A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest land for some special purpose.
STAGNATION	A condition where individual tree growth within a stand is restricted by overstocking, disease, or competition for available sunlight or soil nutrients.
STAND	An aggregation of trees or other vegetative growth occupying a specific area and sufficiently uniform in composition (species), age arrangement, and conditions as to be distinguishable from the other growth on adjoining lands.
STOCKING	A measure of timber stand density or the number of trees per acre.
STREAM ORDER	A measure of the position of a stream in the hierarchy of tributaries. (Stream as referenced here refers to perenniel streams.) a. First-order streams are unbranched streams, that is they have no tributaries. b. Second-order streams are formed by the confluence of two or more first-order streams. They are considered second-order until they join another second-order or larger stream. c. Third-order streams are formed by the confluence of two or more second-order streams. They are considered third-order until they join another third-order or larger stream.
SUCCESSIONAL STAGE	A phase in the gradual supplanting of one community of plants by another.
SUITABILITY	The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.
SUITABLE FOREST LAND	Forest land (as defined in CFR 219.3) for which technology is available that will ensure timber production without irreversible resource damage to soils, productivity, or watershed conditions; for which there is reasonable assurance that such lands can be adequately restocked (as provided in CFR 219.14); and for which there is management direction that indicates that timber production is an appropriate use of that area.
SUSTAINED YIELD	The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest without impairing the productivity of the land.

SYSTEM ROADS	Roads that are part of the Forest development transportation system, which includes all existing and planned roads, as well as other special and terminal facilities designated as Forest development transportation facilities.

T

TEMPORARY ROADS	Roads which are constructed for a one time or short term use which are not expected to be utilized in the future. These roads will be obliterated after the need is past.
THERMAL COVER	Cover used by animals to ameliorate effects of weather; for elk, a stand of coniferous trees 40 feet or taller with an average crown closure of 70 percent or more.
THREATENED AND ENDANGERED SPECIES	A species or subspecies of animal or plant whose prospects of survival and reproduction is in immediate jeopardy or likely to become so within the foreseeable future. Threatened species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act.
TIMBER BASE	The lands within the Forest capable, available, and suitable for timber production.
TIMBER HARVEST SCHEDULE	The quantity of timber planned for sale and harvest, by time period, from the area of land covered by the Forest Plan. The first period, usually a decade, of the selected harvest schedule provides the allowable sale quantity. Future periods are shown to establish that sustained yield will be achieved and maintained.
TIMBER STAND IMPROVEMENT (TSI)	All noncommercial intermediate cuttings and other treatments to improve composition, condition, and increment of a timber stand.
TRANSITORY RANGE FORAGE	Range forage produced following the removal of overstory vegetation, usually through timber harvest. Forage in these areas may be available for permitted use by domestic livestock for a period of time until overstory vegetation supplants the site.
TREE OPENING	An opening in the forest cover created by the application of even-aged silvicultural practices.

U

UNEVEN-AGED MANAGEMENT	The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is

	usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.
	Individual Tree Selection Cutting - Involves the removal of selected trees of all size classes on an individual basis.
	Group Selection Cutting - Involves the removal of selected trees of all size classes in groups of a fraction of an acre up to 5 acres in size.
UNREGULATED HARVEST	This harvest is not charged against the allowable sale quantity. It includes occasional volumes removed that were not recognized in calculations of the allowable sale quantity, such as cull or dead material and noncommercial species and products. It also includes all volume removed from nonsuitable areas. Harvests from nonsuitable areas will be programmed as needed to meet multiple use objectives other than timber production and for improvement of administrative sites.
UNSUITABLE TIMBER LAND	Lands not selected for timber production in the Forest Plan alternative due to (1) the multiple-use objectives for the alternative preclude timber production, (2) other management objectives for the alternative limit timber production activities to the point where management requirements set forth in 36 CFR 219.27 cannot be met and (3) the lands are not cost-efficient over the planning horizon in meeting forest objecttives that include timber production. Land not appropriate for timber production shall be designated as unsuitable in the preferred alternative and Forest Plan.
UTILITY CORRIDOR	Corridor of land which is designated for energy transmission lines.
UTILIZATION STANDARDS	Standards guiding the use and removal of timber. They are measured in terms of diameter at breast height (d.b.h.) and top of the tree inside the bark (top d.i.b.) and the percentages of "soundness" of the wood.

V

VALUE, MARKET	The unit price of an output normally exchanged in a market after at least one stage of production, expressed in terms of what people are willing to pay as evidenced by market transactions.

VISUAL QUALITY OBJECTIVE (VQO)	A desired level of excellence based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations of the characteristic landscape.

Preservation: In general, human activities are not detectable to the visitor.

Retention: Human activities are not evident to the casual Forest visitor.

Partial Retention: Human activities may be evident, but must remain subordinate to the characteristic landscape.

Modification: Human activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in middle-ground or background.

Maximum Modification: Human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

Enhancement: A short-term management alternative which is done with the express purpose of increasing positive visual variety where little variety now exists.

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APPENDICES

Appendix A	Land Classification Summary
Appendix B	[illegible]
Appendix C	[illegible]
Appendix D	[illegible]
Appendix E	[illegible]
Appendix F	[illegible]
Appendix G	[illegible]
Appendix H	[illegible]
Appendix I	[illegible]
Appendix J	[illegible]
Appendix K	[illegible]
Appendix L	[illegible]
Appendix M	[illegible]
Appendix N	[illegible]
Appendix O	[illegible]
Appendix P	[illegible]
Appendix Q	[illegible]
Appendix R	[illegible]
Appendix S	[illegible]

APPENDICES

Appendix A	Land Classification Summary
Appendix B	Wilderness Experience Opportunity Class Descriptions and Guidelines
Appendix C	Elk Effective Cover Calculation Process
Appendix D	Assigned Visual Quality Sensitivity Levels for Key Viewing Points and Corridors
Appendix E	Exterior Public Access Needs
Appendix F	Allowable Sale Quantity and Long-Term Sustained Yield Capacity
Appendix G	Continental Divide National Scenic Trail--Potential Trail Corridors
Appendix H	Timber Productivity Classification
Appendix I	Present and Future Forest Conditions
Appendix J	Vegetative Management Practices
Appendix K	Ten-Year Timber Sale Schedule
Appendix L	Projected Budget Required to Implement the Forest Plan
Appendix M	Procedures for Making Changes in Management Area Designations
Appendix N	Schedule of Watershed Restoration Projects
Appendix O	Criteria and Schedule for Review of Withdrawals
Appendix P	Schedule of Wildlife Habitat Improvement Projects
Appendix Q	Criteria and Schedule for Range Allotment Management Plan Completion and Implementation
Appendix R	Criteria and Schedule for Range Structural and Non-structural Range Improvements
Appendix S	Schedule of Trail Reconstruction Projects

List of Appendices - 2

Appendix T (unbound)	Interagency Agreement for Management Involving Grizzly Bears in the Greater Yellowstone Ecosystem, for Determining Grizzly Bear Nuisance Status and for Controlling Nuisance Grizzly Bears on National Forest Land
Appendix U (unbound)	Fire Management Action Plan
Appendix V (unbound)	Beaverhead National Forest Outfitter and Guide Policy
Appendix W (unbound)	Soils and Water Conservation Practices Handbook (FSH 2509.22)
Appendix X (unbound)	Environmental Assessment for Beaverhead National Forest Oil and Gas Leasing
Appendix Y (unbound)	Southwestern Montana Interagency Visitors Map
Appendix Z (unbound)	Anaconda-Pintler Wilderness Management Plan
Appendix AA (unbound)	Lee Metcalf Wilderness Management Plan
Appendix BB (unbound)	Recreation Opportunity Spectrum (ROS) Settings (maps)
Appendix CC (unbound)	Coordinating Elk and Timber Management--Final Report of the Montana Cooperative Elk-Logging Study 1970-1985
Appendix DD (unbound)	Lewis and Clark National Historic Trail Comprehesive Management Plan
Appendix EE (unbound)	Beaverhead National Forest Capital Investment Program--5 year
Appendix FF (unbound)	The Indian Creek Watershed Plan; Sheridan Municipal Watershed
Appendix GG (unbound)	Rattlesnake Creek Municipal Watershed Plan; Dillon Municipal Watershed
Appendix HH (unbound)	Continental Divide Gray Wolf Coordination Plan
Appendix II (unbound)	Greater Yellowstone Ecosystem Bald Eagle Management Plan
Appendix JJ (unbound)	Beaverhead National Forest Environmental Impact Statement for Control of Noxious Weeds

List of Appendices - 3

Appendix KK (unbound)	Recreation Opportunity Spectrum (ROS) User's Guide
Appendix LL (unbound)	National Forest Landscape Management - Volume II: "The Visual Management System" (the "Big Eye" Book)

Unbound appendices are available on request or can be reviewed at the Beaverhead National Forest Supervisor's Office, Dillon, Montana.

APPENDIX A

Land Classification Summary

Forest habitat type, soils, timber type, legal status, and inventory data were used to determine the acres displayed in the following table.

Land Class Categories	Acres
1. Non Forest Land (includes water)	558,488
2. Forest Land 3/	1,589,033
3. Land withdrawn from timber production	174,043
4. Forest Land not capable of producing crops of industrial wood	469,624
5. Forest Land physically unsuitable: --irreversible damage likely to occur --not restockable within 5 years	136,197
6. Forest Land -- inadequate information 1/	----
7. Tentatively Suitable Forest Land (Item 2 minus Items 3,4,5, and 6)	809,169
8. Forest Land not appropriate for timber production 2/	470,829
9. Unsuitable Forest Land (Items 3,4,5,6, and 8)	1,250,693
10. Total Suitable Forest Land 4/ (Item 2 minus Item 9)	338,340
11. Total National Forest Land (Items 1 and 2)	2,147,521

1/ Lands for which current information is inadequate to project responses to timber management.

2/ Lands identified as not appropriate for timber production due to: assignment to other resource uses to meet Forest Plan objectives; management requirements; and not being cost efficient in meeting Forest Plan objectives over the planning horizon.

3/ Includes non-forested acres included in existing designated wilderness areas.

4/ If the West Pioneer Montana Wilderness Study Area is released for management, the total suitable forest land would increase to 360,300 acres.

Appendix B

Wilderness Experience Opportunity Class Descriptions and Guidelines

Opportunity Classes represent a spectrum of wilderness experience opportunities within the Wilderness. These classes describe existing areas within the Wilderness having different resource and social conditions. They also identify management actions that are acceptable within each class. Inherent in the definitions are different levels of resource and social conditions acceptable for each class in the spectrum.

Three components are used to describe opportunity classes: resource, social, and managerial settings. Each component has several elements that are used to describe differences between opportunity classes. These descriptions provide managers, researchers, and users with common definitions for terms used to describe areas within the Wilderness.

Opportunity class definitions include descriptions of the resource, social, and managerial settings. Also included is a table to allow the reader to compare differences between classes.

Opportunity Class I

A. Resource Setting:

Characterized by an unmodified natural environment. Ecological and natural processes are not measurably affected by the actions of users. Environmental impacts are minimal, restricted to temporary loss of vegetation where camping occurs and along some livestock travel routes, typically recover on an annual basis and are subtle in nature and generally not apparent to most visitors.

B. Social Setting

Provides an outstanding opportunity for isolation and solitude free from evidence of human activities and with very infrequent encounters with users. The user has outstanding opportunities to travel across country utilizing a maximum degree of outdoor skills, often in an environment that offers a very high degree of challenge, self-reliance and risk. Interparty contacts will be very few while traveling and rare to non-existent at the campsite.

C. Managerial Setting

Management will strongly emphasize sustaining and enhancing the natural ecosystem. Direct onsite management of visitors will be seldom. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailheads or boundary portals. Contact of visitors within this class by Forest personnel will be mostly reactive and by invitation, with discussion items limited to what visitors want to know. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefits to all. Formal regulations, orders and/or permits will be considered only when less restrictive regulations or programs have consistently failed to achieve desired goals and objectives. Infrequent patrols and monitoring of conditions by appropriate State and Federal agency personnel will be conducted only as necessary to achieve management objectives. All scientific and ecological monitoring actions will be scheduled to meet social setting criteria. Trails will not be constructed and maintenance will be conducted only to protect the resource. No trail signs will be present, and no facilities of any kind will be provided or permitted, including lookouts and radio transmitter stations.

Opportunity Class II

A. Resource Setting

Characterized by an essentially unmodified natural environment. Ecological and natural processes and conditions are minimally affected by the action of users. Environmental impacts are low and restricted to minor losses of vegetation where camping occurs and along most travel routes. Most impacts recover on an annual basis and will be apparent to only a low number of visitors.

B. Social Setting

High opportunity for exploring and experiencing isolation from the sights and sounds of man with the probability of encountering other users being low. The user has good opportunity for experiencing independence, closeness to nature, tranquility, and self-reliance through the application of primitive recreation skills. These opportunities occur in an environment that offers a high degree of challenge and risk. Interparty contacts will be low on the trail and fairly low at the campsite, with parties often camped in isolation.

C. Managerial Setting

Management will emphasize sustaining and enhancing the natural ecosystem. Direct onsite management will involve minimum visitor contact during the normal use season. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailhead and boundary portals. Contact of visitors by Forest personnel will be mostly reactive and by invitation. In addition to what the visitor wants to know, the opportunity will be seized to present other pertinent site-specific messages. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit to all. Formal rules and regulations may be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measures have failed to achieve desired goals and objectives. Signs will be permitted within the area and will provide only the minimum information necessary to protect the wilderness resource. Trails will normally be constructed, maintained and managed to accommodate light and infrequent travel. Routes will be maintained only for resource protection and minimal user safety. Modification of the natural environment would be minimal. The route should provide the user with an opportunity for testing skills and experiencing a sensation of physical exertion and a feeling of accomplishment. Facilities will be provided, only in a few extreme cases, and those that are will be permitted only for resource protection and will use only native materials.

Opportunity Class III

A. Resource Setting

Characterized by an essentially unmodified natural environment where ecological and natural processes are in a few areas moderately affected the action of users. Environmental impacts are moderate, with most are along travel routes and near campsites showing moderate losses of vegetation. Impacts in some areas often persist from year to year and apparent to a moderate number of visitors.

B. Social Setting

Moderate opportunities for exploring and experiencing isolation from th sights and sounds of man, with the probability of encountering other use low to moderate. The user has moderate opportunities for experiencing independence, closeness to nature, tranquility and self-reliance throug the application of primitive recreation skills. These opportunities occ in a natural environment that normally offers a moderate degree of challenge and risk. Contact with other visitors both on the trail and while camped will be moderately frequent.

C. Managerial Setting

Management will emphasize sustaining and enhancing the natural ecosystem Onsite management will involve routine visitor contact. Necessary rules and regulations will be communicated to visitors outside the area, such at trailheads and boundary portals. Contact is initiated by Forest personnel during routine duties. Information concerning protection of site-specific wilderness resources will be presented. Formal and inform user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit to all. Formal rules and regulations may be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measur have failed to achieve desired goals and objectives. Signs will be permitted within the area and will include the minimum number necessary protect the wilderness resource, and for administration. Trails will normally be constructed, maintained, and managed to accommodate moderate use for the majority of the use season. The route will only modify natur conditions to the extent necessary to protect the environment and provid for moderately safe use by a user with limited experience and average physical ability. A moderate number of facilities will be provided or permitted, and only those necessary for the protection of the wilderness resource and the user. Natural materials will dominate. Dimensional and non-native materials may be used but must remain not evident to the aver user.

Opportunity Class IV

A. Resource Setting

Characterized by a predominantly unmodified natural environment where ecological and natural processes are in many locations substantially affected by the action of users. Environmental impacts are generally high in areas along major travel routes, along popular stream corridors and lake shores, and near major entry points. Impacts often persist from year to year and there may be moderate loss of vegetation and soil at some sites. Impacts are readily apparent to most visitors.

B. Social Setting

Moderate to low opportunities for exploring and experiencing isolation from the sights and sounds of man with the probability of encountering other area users moderate to high. The user has the opportunity for a high degree of interaction with the natural environment, often with low or moderate challenge and risk. Contacts with other users will be relatively high much of the time, both on the trail and at campsites. Some parties will camp out of sight and sound of other parties, but this will not be common during the main-use season.

C. Managerial Setting

Management will be oriented to sustaining and enhancing the natural ecosystem. There will be frequent opportunity for visitor contact with management personnel. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailheads and boundary portals. Special efforts will be taken to contact visitors. Information concerning wilderness management, user conflicts, fire prevention, and other pertinent subjects will be presented. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit to all. Formal rules and regulations may be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measures have failed to achieve desired goals and objectives. Signs within the wilderness will be placed to aid in distributing and dispersing use, and for resource protection purposes. Trails will normally be constructed, maintained, and managed to accommodate heavy traffic for the majority of the use season. The routes will blend into the natural features of the area. Facilities and improvements may be provided and permitted for resource protection, user safety, and limited user convenience. Facilities when constructed will emphasize the use of natural materials. Dimensional and non-native materials are acceptable but should harmonize with the natural environment.

TABLE 1.

SUMMARY OF RESOURCE AND SOCIAL SETTING COMPONENTS FOR EACH OPPORTUNITY CLASS

	OPPORTUNITY CLASS I	OPPORTUNITY CLASS II	OPPORTUNITY CLASS III	OPPORTUNITY CLASS IV
RESOURCE SETTING: (General Description)	Unmodified natural environment	Unmodified natural environment	Unmodified natural environment	Predominantly unmodified natural environment
1) Ecological Conditions	Not measurably affected by the action of users	Minimally affected by the action of users	Moderately affected by the action of users	Many locations substantially affected by the action of users
2) Prevalence and Duration of Impact	Temporary loss of vegetation where camping occurs and along some travel routes. Typically recovers on an annual basis.	Minor loss of vegetation where camping occurs and along most travel routes. Most impacts recover on an annual basis.	Moderate loss of vegetation where camping occurs and along most travel routes. Impacts in some areas persist from year to year.	Moderate loss of vegetation and soil on major travel routes, campsites, and popular lake shores. Impacts persist from year to year.
3) Visibility of Impacts	Not apparent to most visitors	Apparent to only a low number of visitors	Apparent to a moderate number of visitors	Impacts are readily apparent to most visitors
SOCIAL SETTING: (General Description)	Outstanding opportunity for isolation and solitude	High opportunity for isolation and solitude	Moderate opportunity for isolation and solitude	Moderate to low opportunities for isolation and solitude
1) General Level of Encounters	Very infrequent	Low	Moderate	Moderate - High
2) Degree of Challenge and Risk	Very High	High	Moderate	Moderate - Low
3) Interparty Contacts while Traveling	Very Few	Low	Moderately Frequent	Relatively High
4) Interparty Contacts at the Campsite	Non-existent	Fairly Low	Moderately Frequent	Common

TABLE 1 (CONTINUED)

SUMMARY OF MANAGERIAL SETTING COMPONENTS FOR EACH OPPORTUNITY CLASS

	OPPORTUNITY CLASS I	OPPORTUNITY CLASS II	OPPORTUNITY CLASS III	OPPORTUNITY CLASS IV
MANAGERIAL SETTING (General Description)	Strongly emphasize sustaining and enhancing the natural ecosystem	Emphasize sustaining and enhancing the natural ecosystem	Emphasize sustaining and enhancing the natural ecosystem	Emphasize sustaining and enhancing the natural ecosystem
1) Contact with Management Personnel during Normal Use Season	Infrequent	Minimum	Routine	Frequent
2) Rules and Regulations and Visitor Behavior	Will be communicated to visitors primarily outside of the wilderness in areas such as at trailheads and boundary portals		Where necessary, on-site enforcement and communication of rules and regulations will be conducted	
3) Formal and Informal User Education Programs	Will be initiated to inform users about what to expect and how to use the area for optimum benefit to all.			
4) Formal Rules and Regulations	May be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measures have consistently failed to achieve desired goals and objectives			
5) Presence and Extent of Signing	No trail signs present	Trail signs permitted. Will provide only minimum information necessary to protect the resource.	Signs will be permitted. Will include minimum number necessary to protect the resources and for administration.	Signs will be placed to aid in distributing and dispersing use, and for resource protection.
6) General Level of Trail Construction and Maintenance	Trails will not be constructed. Maintenance conducted only to protect the resource.	Managed to accommodate light and infrequent travel. Maintained only for resource protection and minimal user safety.	Managed to accommodate moderate use. Maintained only for resource protection and moderate user safety.	Managed to accommodate heavy traffic. Maintained for resource protection, user safety and limited user convenience.
7) Presence of Facilities	None provided or permitted	Very few provided or permitted and only for resource protection	Moderate number provided or permitted and only for user and resource protection	May be provided or permitted for resource protection and user safety

Appendix C

Elk Effective Cover Calculation Process

Elk effective cover is a term that relates to the ability of an area to provide security for elk. It is determined by estimating the percent of hiding cover in an area and modifying it by the density of open roads. The area used for calculation is based on the stimated summer/fall home range for elk that inhabit the areas of the sale. The actual boundary of the analysis area is tied to timber compartment or subcompartment lines. Usually, the analysis area encompasses about 12-15 square miles.

The determination of hiding cover is made by estimating the percent of hiding cover that a P.I. (timber photo interpretation) type provides. This estimate is taken directly from the Elk-Logging Study. 1/ For example, an acre of P.I. type 14 is considered to be 63 percent hiding cover. The acres of hiding cover are then divided by the total acres in the analysis area to determine percent hiding cover.

The percent of hiding cover is then used to predict the elk use potential of the area. This calculation is also taken directly from the Elk-Logging Study. 1/ For example, 40 percent hiding cover equals 100 percent elk use potential.

Road mileage is modified by whether or not it is main, secondary, or primitive road. Main roads are calculated at 100, secondary at 70, and primitive at 5 percent of their actual distance. The total open miles of road in the analysis area is then divided by the total square miles in the area to obtain the density per square mile. The road model in the Elk-Logging Study 1/ is then used to calculate the habitat effectiveness of the area. For example, one mile of open road per square mile of area equals 60 percent habitat effectiveness.

The elk effective cover is then calculated by multiplying the elk use potential by the habitat effectiveness. For example, an elk use potential of 100 percent multiplied by a habitat effectiveness of 60 percent would equal an elk effective cover rating of 60 percent.

1/ Montana Cooperative Elk-Logging Study, Annual Program Report, August 1982.

Appendix D

Assigned Visual Sensitivity Levels for Key Viewing Points and Corridors

The following appendix describes the assigned visual sensitivity levels for viewing points and corridors on the Forest. Points and corridors not shown on the list are assumed to be visual sensitivity level three. These viewing points and corridors as described, are mapped and available for review in the Forest Supervisor's Office or at the appropriate Ranger District Office.

Considerations for visual sensitivity levels combined with visual variety class and distance from the viewing area will be used to develop Visual Quality Objectives for all project activities. A detailed description of how these factors affect VQO assignments may be reviewed in the National Forest Landscape Management System Handbook, Volume #2: The Visual Management System.

DILLON DISTRICT

Sensitivity Level One.

Travel Corridors

1. Interstate #15 from Butte, Mt. to Monida Pass.
2. State Highway #278 from Dillon, Mt. to Jackson, Mt.
3. Wise River/Polaris Road (FR #484) from State Highway #278 to the district boundary.
4. State Highway #324 from Interstate #15 to the end of the Pavement.

Communities

1. Dillon, Mt.
2. Lima, Mt.

Cultural Sites

1. Sacajawea Historic Area.
2. Bannack State Park.

Recreation Areas

1. Clark Canyon Dam and Reservoir.
2. Maverick Mountain Ski Area.
3. Elkhorn Recreation Complex.
4. Birch Creek Education Center.

Campgrounds

1. Grasshopper Campground.
2. Dinner Station Campground.
3. Reservoir Lake Campground.
4. Sacajawea Memorial Campground.
5. East Creek Campground.
6. Browns Lake Campground.

Sensitivity Level Two

Travel Corridors

1. Medicine Lodge Creek Road (FR #257) from State Highway #324 to Kate Creek.
2. Big Sheep Creek Road (FR #257) from Interstate #15 to the Nicholia Road (FR #6571).
3. Lewis and Clark Historical Trail from State Highway #324 to Bannack.
4. Bloody Dick Road (FR #181) from State Highway #324 along Bloody Dick Creek road through Reservoir Lake to the district boundary.
5. Lewis and Clark Historical Trail (FR #3909) from State Highway #324 to Lemhi Pass.
6. Birch Creek Road (FR #98) from Interstate #15 to to the Birch Creek Ranger Station.
7. Birch Creek Road (FR #192) from the Birch Creek Ranger Station to Dinner Station Campground.
8. Estler Lake Road from (FR #606) to Estler Lake.

9. Ten Mile Creek Road (FR #606) from the Birch Creek Ranger Station to Argenta.
10 Browns Lake Road from Interstate #15 to end of Road.
11. State Highway #324 from the end of the Road to Bannack Pass.
12. Willow Creek Road (FR #192.2) from the Birch Creek Road (FR #192) to the Rainbow Lake Trail (Tr. #122).
13. Shineberger/Sawmill Road from Interstate #15 to the Little Sheep Creek trailhead.
14. Little Sheep Creek Road (FR #179.1) from Interstate #15 to the East Fork Campground.

Picnic Areas

1. Crystal Park Picnic Area
2. Aspen Picnic Area

Lakes

1. Lake Agnes
2. Boot Lake
3. Pear Lake
4. Minneopa Lake
5. Morrison Lake
6. Deadman Lake
7. Estler Lake
8. Kelly Lake
9. Boatman Lake
10. Deerhead Lake
11. Tent Lake
12. Rainbow Lake
13. Bond Lake
14. Peterson Lake

Trails

1. Rock Creek Trail (Tr. #2) from the end of the Browns Lake Road toward Wakena Lake to the Proposed Wilderness boundary.
2. Tendoy Lake Trail from the Willow Creek Road (FR #192.2) to the Proposed Wilderness boundary.
3. Gorge Lake Trail (Tr. 154) from the Willow Creek Road (FR #192.2) to the Proposed Wilderness boundary.
4. Birch Creek Trail (Tr. #72) from Dinner Station Campground to Pear Lake.
5. Mule Creek Trail (Tr. #55) from Minneopa Lake to Estler Lake.
6. Bear Wallow Trail (Tr. #425) from the Wise River Polaris Road (FR #484) to its junction with the Beaver Creek Trail (Tr. #192)
7. Elkhorn Ski Touring Trails.
8. Old Tim Trail (Tr. #167) from the Beaver Creek, Bear Wallow Creek Trail Junction to the district boundary.
9. Little Sheep Trail (Tr. #40) from the Little Sheep Creek Road (FR #179.2) to the parking area at the end of the Shineberger/Sawmill Road.

WISE RIVER DISTRICT

Sensitivity Level One.

Travel Corridors

1. Interstate #15 from Butte, Mt. to Monida Pass.
2. State Highway #43 from Divide, Mt. to Wisdom, Mt.
3. County Road #274 from State Highway #43 to the Continental Divide.
4. Wise River/Polaris Road (Forest Highway #484) from Wise River, Mt. to the district boundary.
5. Bighole River from Wisdom, Mt. to its' confluence with the Beaverhead River.

Communities

1. Wise River, Mt.
2. Melrose, Mt.

Campgrounds

1. Little Joe Campground.
2. Mono Creek Campground.
3. Lodgepole Campground.
4. Willow Campground.
5. Seymour Creek Campground.
6. Pintler Campground.
7. Canyon Creek Campground.

Sensitivity Level Two

Travel Corridors

1. Wyman Creek Road (FR #938) from the Wise River/Polaris Road (Forest Highway #484) to the Odell Creek Trailhead.
2. Pintler Lake Road (FR #185) from State highway #43 to the wilderness boundary.
3. West Side Road (FR #1251) from State Highway #43 to Wisdom, Mt.
4. LaMarche Creek Road (FR #935) from State Highway #43 to the Sundance Lodge.
5. Seymore Creek Road (FR #934) from State Highway #274 to Lower Seymore Lake Campground.
6. Canyon Creek Road (FR #187) from Melrose, Mt to Canyon Creek Campground.
7. Lacy Creek Road (FR #90) from the Wise River/Polaris Road (Forest Highway #484) to the gate closure.
8. Elkhorn Mine Road (FR #2465) from the Wise River/Polaris Road (Forest Highway #484) to the Lower Elkhorn Mine.
9. Quartz Hill/Vipond Park Road (FR #187) from Highway #43 to Canyon Creek.)

10 Jerry Creek Road (FR #83) from Highway #43 to its' junction with the Jimmy New Loop Road (FR #2480).

11. Mudd Creek Road (FR #1223) from Highway #43 to the Northside Road (FR #1203).

12. Northside Road (FR #1203) from its junction with the East Fork Fishtrap Trail (Tr. #128) to its junction with the Mudd Creek Trail (Tr. #127).

Cultural Sites

1. The Charcoal Kilns along the Canyon Cr. Road (FR #187).
2. The Hecla Mining Complex.

Trails

1. Cherry Lake Trail (Tr. #123) to East Pioneer Wilderness boundary.
2. Canyon Creek Trail (Trs. #92 and #28) to the East Pioneer Wilderness boundary
3. Jacobsen Creek Trail (Tr. #2) to the East Pioneer Wilderness boundary.
4. LaMarche Creek Trail (Tr. #126) to the Anaconda-Pintler Wilderness boundary.i
5. Seymore Creek Trail (Tr. #131) to the Anaconda-Pintler Wilderness boundary.
6. West Fork Fishtrap Trail (Tr. #177) to the Anaconda-Pintler Wilderness boundary.
7. Pintler Creek Trail (Tr. #37) to the Anaconda-Pintler Wilderness boundary.
8. Tenmile Lakes Trail.

WISDOM DISTRICT

Sensitivity Level One.

Travel Corridors

1. State Highway #43 from Wise River, Mt. to Chief Joseph Pass.
2. State Highway #278 from Dillon, Mt. to Wisdom, Mt.

Communities

1. Wisdom, Mt.
2. Jackson, Mt.

Cultural Sites

1. Bighole Battlefield National Monument.

Campgrounds

1. May Creek Campground.
2. Miner Lake Recreation Complex.
3. Mussigbrod Recreation Complex.
4. South Van Houten Recreation Complex
5. Steel Creek Campground.
6. Twin Lakes Recreation Complex.

Sensitivity Level Two

Travel Corridors

1. Mussigbrod Creek Road (FR #573.2) from the West Side Road (FR #1251) to Mussigbrod Campground.
2. West Side Road (FR #1251)
3. Steel Creek Road from Wisdom, Mt. to Steel Creek Campground.
4. Gibbonsville Road (FR #624) from State Highway #43 to Bighole Pass.
5. Foothills Road section along Ruby Creek (FR #945.1) from State Highway #43 to the Gibbonsville Road (FR #624).
6. Miller Lane, Briston Lane, and the Foothills Road along Big Lake Creek (FR #183) from State Highway #278 to Twin Lake Campground.
7. Miner Lake Road (FR #182) from State Highway #278 to Miner Lake Campground.
8. Bloody Dick Road (FR #181 from State Highway #278 to the district boundary.
9. Trail Cr. Road (FR #106.3) from St. Highway #43 to Gibbons Pass.

Cabins

1. Hogan Cabin
2. Bender Cabin

Trails

1. Moose Creek, Rock Creek loop (Tr. #376)
2. Sand Lake Trail from Steele Creek Guard Station to Sand Lake.
3. May Creek Trail (Tr. #103) from May Creek Campground to the Forest boundary.

SHERIDAN DISTRICT

Sensitivity Level One.

Travel Corridors

1. Interstate #15 from Butte, Mt. to Monida Pass.
2. State Highway #287 from Twin Bridges, Mt. to Ennis, Mt.
3. State Highway #41 from Dillon, Mt. to Silver Star, Mt.
4. Ruby River Road from Alder, Mt. to Ruby Reservoir.

Communities

1. Twin Bridges, Mt.
2. Sheridan, Mt.
3. Virginia City, Mt.
4. Alder, Mt.
5. Laurin, Mt.

Recreation Areas

1. Ruby Reservoir.

Campgrounds

1. Mill Creek Campground.
2. Branham Lake Campground.
3. Cottonwood Campground.
4. Balanced Rock Campground.

Sensitivity Level Two

Travel Corridors

1. Sweet Water Road from State Highway #41 to the Ruby River Road.
2. Blacktail Road from Dillon, Mt. to the Centennial Valley Road.
3. Ruby River Road from Ruby Reservoir to the Centennial Valley Road.
4. Centennial Valley Road from Monida, Mt. to Henrys' Lake, Id.
5. Mill Creek Road (FR #111) from Sheridan, Mt. to Branham Lake Campground.
6. Warm Springs Road (FR #163) from the Ruby River Road to Clover Meadows Rest Area.
7. Forest Roads #347 and #290 from the Ruby River Road to the West Fork Rest Area.
8. Gravelly Range Road (FR #290) from Clover Meadows Rest Area to West Fork Rest Area.

Trails

1. Snowcrest Trail (Tr. 603, 69, 670) from Vigilante to Antone Station.
2. Snowcrest Trail (Tr. 603) from junction of Trail #69 to Peterson Basin.
3. Divide Trail (Tr. #61) from Divide Administrative Site to the Snowcrest Trail (Tr. #603).
4. East Fork Blacktail Trail (Tr. 69) from the end of the East Fork Blacktail Road to the Snowcrest Trail (Tr. #603).
5. Mill Creek Trail Complex from the end of the Mill Creek Road (FR #111) to various destinations as shown on map.

MADISON DISTRICT

Sensitivity Level One.

Travel Corridors

1. State Highway #287 from Twin Bridges, Mt. to Ennis, Mt.
2. Ruby River Road, from Alder, Mt. to Ruby Reservoir.
3. U.S. Highway #287 from Quake Lake, Mt. to Three Forks, Mt.
4. State Highway #87 from U.S Highway #287 to Henrys Lake, Id.
5. Madison River, from Earthquake Lake to Three Forks, Mt.

Communities

1. Ennis, Mt.
2. Virginia City, Mt.

Recreation Areas

1. Earthquake Recreation Area.
2. Ennis Lake Recreation Complex.
3. Cliff, Wade Lake Recreation Complex.
4. Elk Lake Recreation Area.
5. West Madison Recreation Area.
6. South Madison Recreation Area.
7. Red Rock Reservoir Game Refuge and Recreation Area.

Campgrounds

1. Elk Lake Campground.
2. Cliff Lake Campground.
3. Wade Lake Campground.
4. Potosi Campground.
5. West Madison Campground.

6. West Fork Madison Rest Area.

7. West Fork Campground.

8. Madison Campground.

Sensitivity Level Two

Travel Corridors

1. Gravelly Range Road (FR #290) from West Fork Rest Area to Clover Meadows Rest Area.

2. Centennial Valley Road from Monida, Mt to Henrys Lake, Id.

3. North Side Centennial Valley Road from Lima Mt. to the Elk Lake Road (FR #8384).

4. Jack Creek Road (FR #166) from Ennis, Mt. to the Jack Creek Trailhead. (Tr. #317).

5. Indian Creek Road from U.S. 287 to the Indian Creek Trail head (Tr. #328).

6. Bear Creek Road from U.S. 287 to Bear Creek Trailhead (Tr. #326) and the connecting county Road to the Indian Creek Road.

7. Papoose Creek Road from U.S. 287 to the Papoose Creek Trailhead (Tr. #355).

8. Potosi Creek Road (FR #160) from Pony, Mt. to the junction with the Bell Lake Trail (Tr. #305).

9. North Meadow Creek Road from McAllister, Mt. to Sure Shot Lakes.

10 South Meadow Creek Road (FR #1221) from McAllister, Mt. to South Meadow Creek Lake.

11. Standard Creek Road (FR #237) from West Fork of the Madison Road (FR #209) to the Gravelly Range Road (FR #290).

12. West Fork of the Madison Road (FR #209) from U.S. 287 to Little Elk River.

13. Elk Lake Road (FR #8384) from the North Side Centennial Valley Road to Elk Lake.

14. Horn Creek Road from State Highway #87 to Cliff Lake.

15. Forest Roads #8381 and #572 from U.S. 287 to Wade Lake.

16. Call Road (FR #290 and #292 from U.S. 287 to Clover Creek Meadows Rest Area.

best copy available

Picnic Areas

1. West Fork Rest Area along the Gravelly Range Road (FR #290).

Lakes

1. Hidden Lake.
2. Goose Lake.
3. Otter Lake.
4. South Meadow Creek Lake.
5. Sure Shot Lakes.
6. Twin Lakes.
7. Hollow Top Lake Complex.

Trails

1. North Willow Creek Trail (Tr. #301) from Pony, Mt. to Hollow Top Lakes
2. North Meadow Creek Trail (Tr. #338 and #366) from the end of the North Meadow Creek Road to Lupine and Twin Lakes.
3. Hidden Lake Trail (Tr. #35) from Elk Lake to Cliff Lake.
4. Lobo Mesa Trail (Tr. #405) from West Fork Madison Road (FR #209) to the junction of Trail #29.
5. Elk River Jeep Trail.

Appendix E

Exterior Public Access Needs
(Roads and Trails)

Much of the Beaverhead National Forest is surrounded by private land and land under the jurisdiction of other State or Federal agencies. This condition makes public and administrative access to the Forest difficult or unavailable in many areas. The Forest is continuing a program of obtaining right-of-way easements through these areas. These easements will provide long term access for commodity resource development such as timber sales, recreation access, and access for other administrative purposes such as fire suppression, and administration of grazing allotments.

Many of these easements do not presently contain an existing road or trail. Construction will be required to complete the needed access. In other areas, existing roads, jeep trails or foot trails are present, but require reconstruction to attain Forest Service standards for public use.

Construction requirements will vary for each access according to the projected use of the transportation facility. Areas accessed for major timber development will normally require primary accesses to be arterial or collector roads. Those areas accessed primarily for light use will require roads built only as local roads or may require only a trail. (See the Glossary for a description of arterial, collector, and local roads).

Exterior access needs and associated road construction are listed by planning unit in Table E-1. The general locations of these access points are displayed in Figures E-1 through E-6.

A precise assessment of total exterior access needs is not possible at this level of planning. For this reason, some identified rights-of-way may not be needed if subsequent project level planning reveals that private land could reasonably be avoided. Conversely, other rights-of-way not now identified may be required.

Table E - 1

KEY: A = arterial road
C = collector road
LOCAL = local road

CONST = construction
RECON = reconstruction

REC = recreation
TIMB = timber
OTHER = gravel pit

EXTERIOR ACCESS

MAP #	ROAD NAME	MILES				
		A & C CONST	A & C RECON	LOCAL CONST	LOCAL RECON	PRIMARY PURPOSE
	WEST BIGHOLE					
1	MUSSIGBROD		6.0			REC
2	LAMARCHE CREEK ROAD					REC
	MADISON					
3	RED KNOB				2.5	REC
4	CEDAR CREEK				5.0	REC
5	TOLMAN CREEK			.75	3.5	REC
6	INDIAN CREEK (TRAIL)					REC
7	WOLF CREEK			1.5	2.5	REC
8	NORTH QUAKE			.75		REC
9	SOUTH INDIAN CREEK (TRAIL)					REC
	GRAVELLY					
10	LANDON		1.2			REC
11	NEELEY		.8			REC
12	ICE CREEK	.5				TIMB
13	NORTH GREENHORN				5.4	REC
14	POWDER GULCH			.1		OTHER
15	METZEL CREEK		4.0			REC

Table E - 1 (cont.)

EXTERIOR ACCESS

DESIG #	ROAD NAME	MILES				
		A & C CONST	A & C RECON	LOCAL CONST	LOCAL RECON	PRIMARY PURPOSE
	FLEECER					
16	BEAR CREEK					REC
17	MITCHELL PARK					REC
	LIMA					
18	HENDERSON-NICHOLIA-ROCK CR.		3.5			REC
19	MEADOW CREEK		5.0			REC
20	SCHWARTZ		4.0			REC
21	JEFF DAVIS		3.5			REC
22	L-DIAMOND		5.0			REC
23	JOHNSON DEER		4.0			REC
24	KATE CREEK	2.0				REC
25	HILDRETH		3.0			REC
26	CHUTE CANYON				.5	REC
27	DEEP CREEK			1.0	.5	REC
28	HORSE PRAIRIE			1.5		REC
29	McKENZIE CANYON			7.5		REC
30	KEYSTONE			.5		REC
31	NOBLE CREEK		3.0			REC
33	COYOTE CREEK TRAIL			1.5	3.0	REC

Table E - 1 (cont.)

EXTERIOR ACCESS						
		MILES				
DESIG #	ROAD NAME	A & C CONST	A & C RECON	LOCAL CONST	LOCAL RECON	ROW
	PIONEER					
35	SAWLOG CREEK (TRAIL)					REC
36	CHERRY CREEK		2.5			REC
37	LOST CREEK	.5	1.0			REC
38	BILLINGS CREEK		2.0			REC
39	ALDER CREEK					REC
40	MEADOW CREEK				2.0	TIM/REC
41	COPP JACKSON					REC
42	DUTCHMAN				4.0	REC
43	TOOMEY CREEK				.2	TIM/REC
44	KEYSTONE					REC
45	TITAN				.2	TIM/REC
	TOBACCO ROOT					
46	CATARACT CREEK		2.0			REC
47	GOODRICH GULCH		2.0			REC

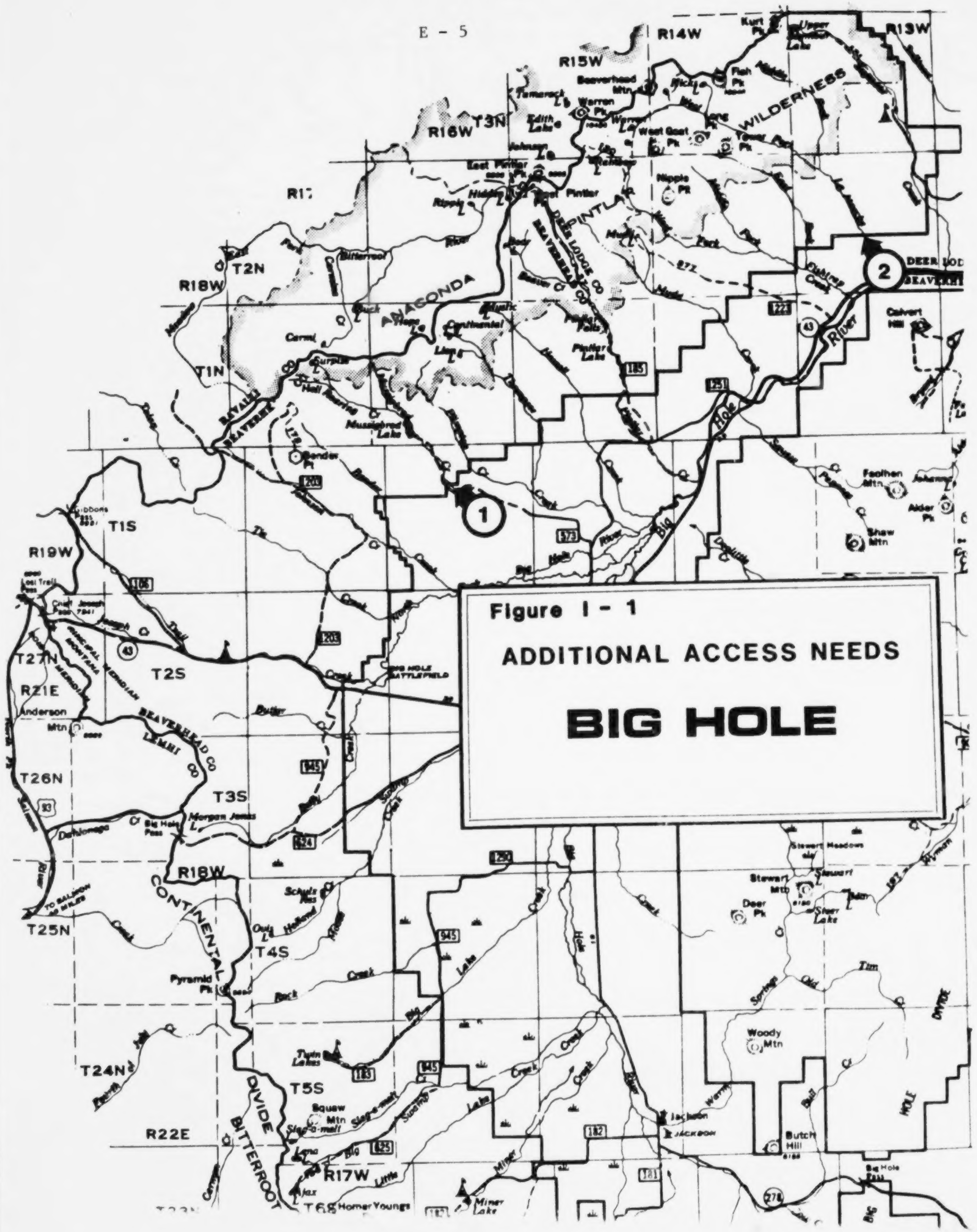

R14W
R13W
R15W
R16W
T3N
WILDERNESS
PINTLAR
ANACONDA
R18W
T2N
T1N
2
1
T1S
R19W
T27N
R21E
T2S
BEAVERHEAD CO
LEMHI CO
T26N
T3S
R18W
CONTINENTAL
T25N
T4S
T24N
T5S
DIVIDE
BITTERROOT
R22E
R17W
Big Hole
River
Jackson

Figure I - 1

ADDITIONAL ACCESS NEEDS

BIG HOLE

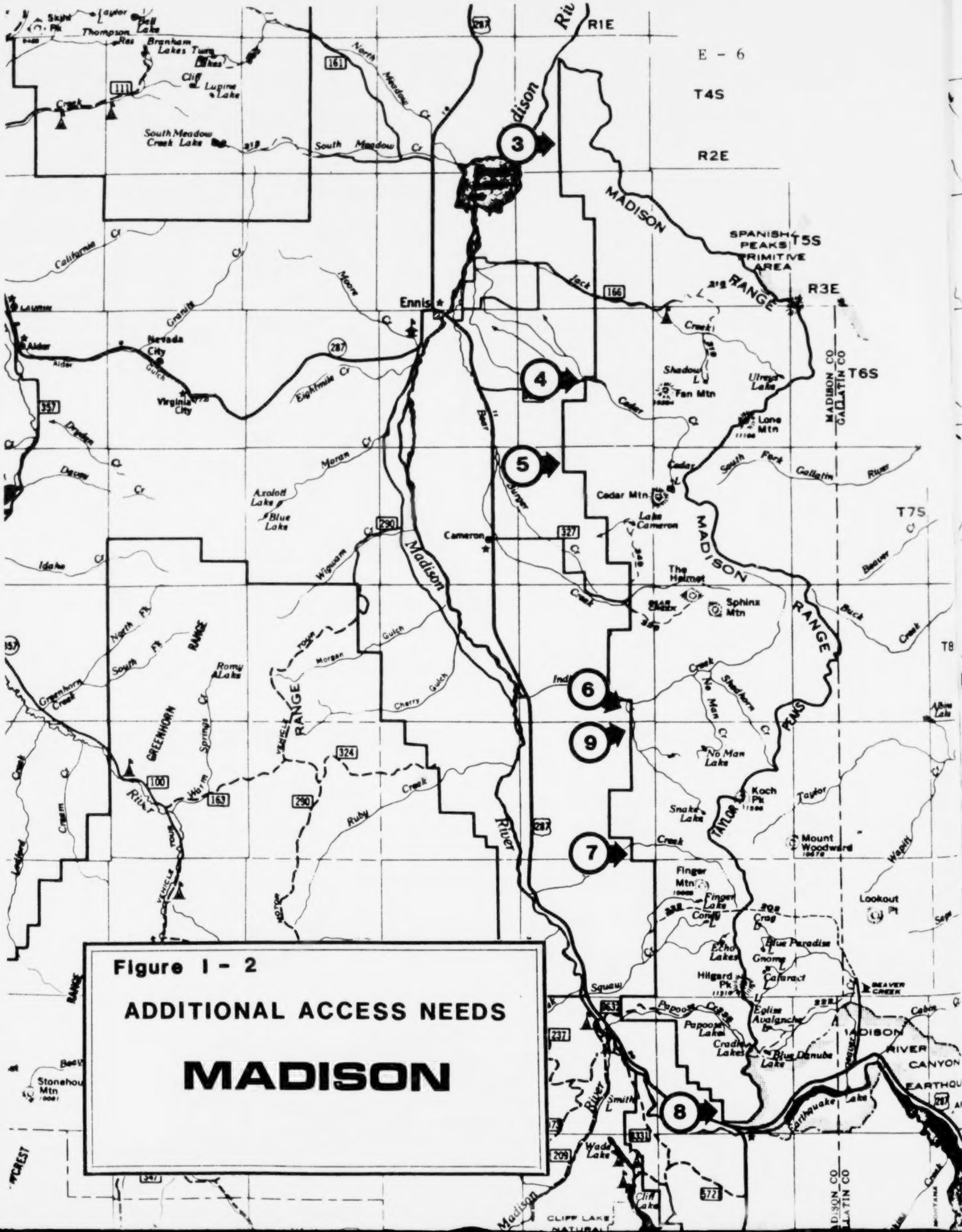

3
4
5
6
9
7
8
Ennis
Cameron
Madison River
MADISON RANGE
SPANISH PEAKS PRIMITIVE AREA
GREENHORN RANGE
Virginia City
Nevada City
Alder
Cedar Mtn
Lake Cameron
The Helmet
Sphinx Mtn
Fan Mtn
Lone Mtn
Koch Pk
Mount Woodward
Finger Mtn
Hilgard Pk
Lookout Pt
South Fork Gallatin River
Earthquake Lake
MADISON RIVER CANYON
MADISON CO
GALLATIN CO
T4S
T5S
T6S
T7S
R1E
R2E
R3E

Figure I - 2

ADDITIONAL ACCESS NEEDS

MADISON

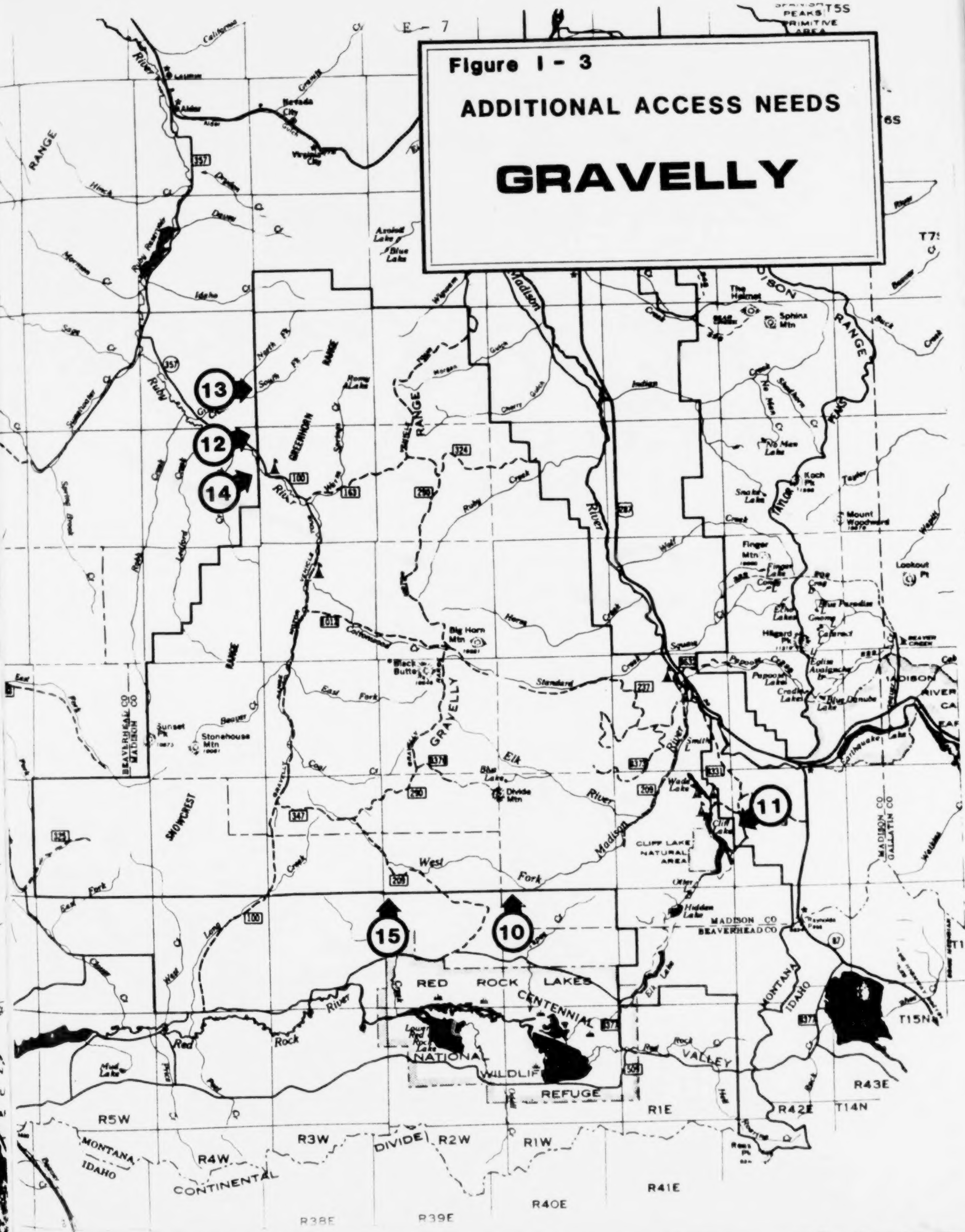

13
12
14
11
15
10
GRAVELLY RANGE
SNOWCREST RANGE
GREENHORN RANGE
Ruby River
Madison River
RED ROCK LAKES
CENTENNIAL VALLEY
NATIONAL WILDLIFE REFUGE
CLIFF LAKE NATURAL AREA
Big Horn Mtn
Black Butte
Sunset Pk
Stonehouse Mtn
Divide Mtn
BEAVERHEAD CO
MADISON CO
GALLATIN CO
MONTANA
IDAHO
CONTINENTAL DIVIDE
R5W
R4W
R3W
R2W
R1W
R1E
R38E
R39E
R40E
R41E
R42E
R43E
T14N
T15N

Figure I - 3

ADDITIONAL ACCESS NEEDS

GRAVELLY

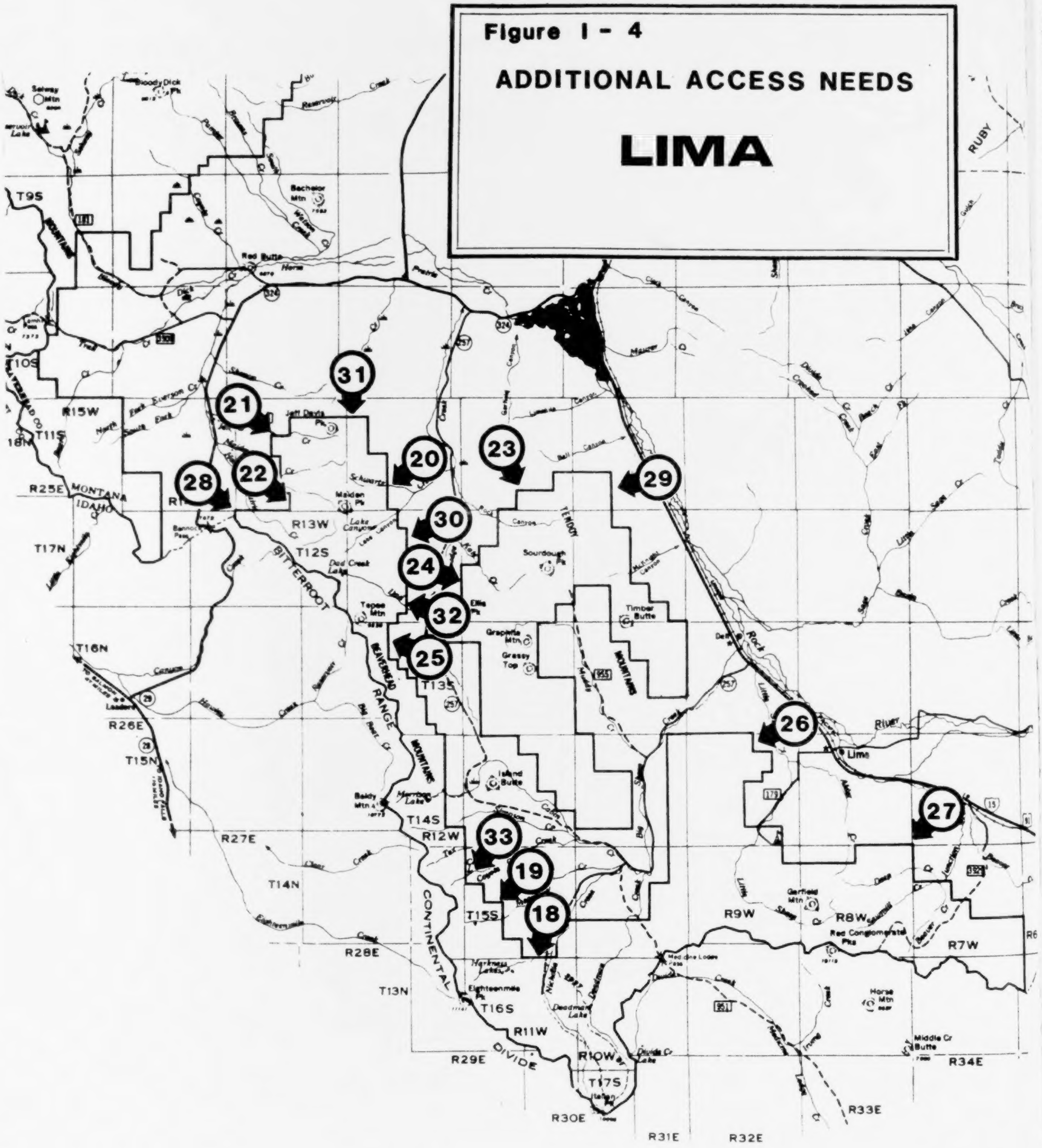


Figure I - 4

ADDITIONAL ACCESS NEEDS

LIMA

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
T9S
T10S
R15W
T11S
R25E
MONTANA
IDAHO
T17N
T12S
R13W
BITTERROOT
T16N
BEAVERHEAD RANGE
R26E
T15N
T13S
T14S
R12W
R27E
T14N
T15S
R28E
CONTINENTAL DIVIDE
T13N
T16S
R11W
R29E
R10W
T17S
R30E
R31E
R32E
R33E
R34E
R9W
R8W
R7W
RUBY
Red Butte
Bachelor Mtn
Jeff Davis Pk
Maiden Pk
Tepee Mtn
Ellis Pk
Graphite Mtn
Grassy Top
Sourdough
Timber Butte
Island Butte
Baldy Mtn
Leadore
Bannock Pass
Eighteenmile Pk
Deadman Lake
Medicine Lodge
Garfield Mtn
Red Conglomerate Pks
Horse Mtn
Middle Cr Butte
Lima
Red Rock River

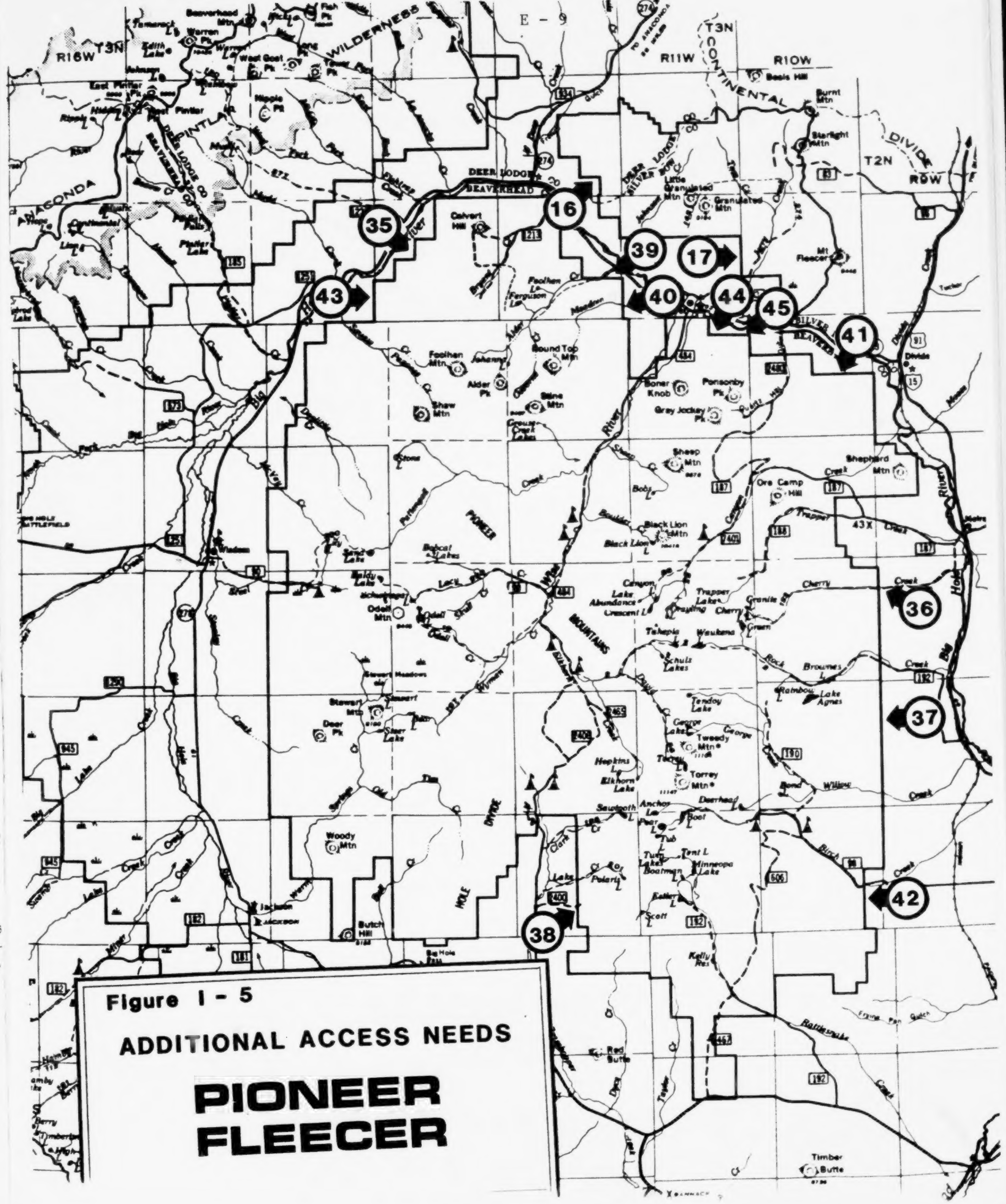


Figure I - 5

ADDITIONAL ACCESS NEEDS

PIONEER FLEECER

16
17
35
36
37
38
39
40
41
42
43
44
45
R16W
T3N
R11W
R10W
T2N
R9W
WILDERNESS
PINTLAR
ANACONDA
DEER LODGE CO
BEAVERHEAD
SILVER BOW
CONTINENTAL DIVIDE
PIONEER
MOUNTAINS
BIG HOLE DIVIDE
Calvert Hill
Foolhen Mtn
Sound Top Mtn
Alder Pk
Shaw Mtn
Odell Mtn
Stewart Mtn
Woody Mtn
Butch Hill
Jackson
Wisdom
Big Hole Battlefield
Black Lion Mtn
Sheep Mtn
Ore Camp Hill
Shephard Mtn
Mt Fleecer
Granulated Mtn
Little Granulated Mtn
Starlight Mtn
Burnt Mtn
Basin Hill
Boner Knob
Ponsonby Pk
Gray Jockey Pk
Divide
Tweedy Mtn
Torrey Mtn
Elkhorn
Polaris
Red Butte
Timber Butte

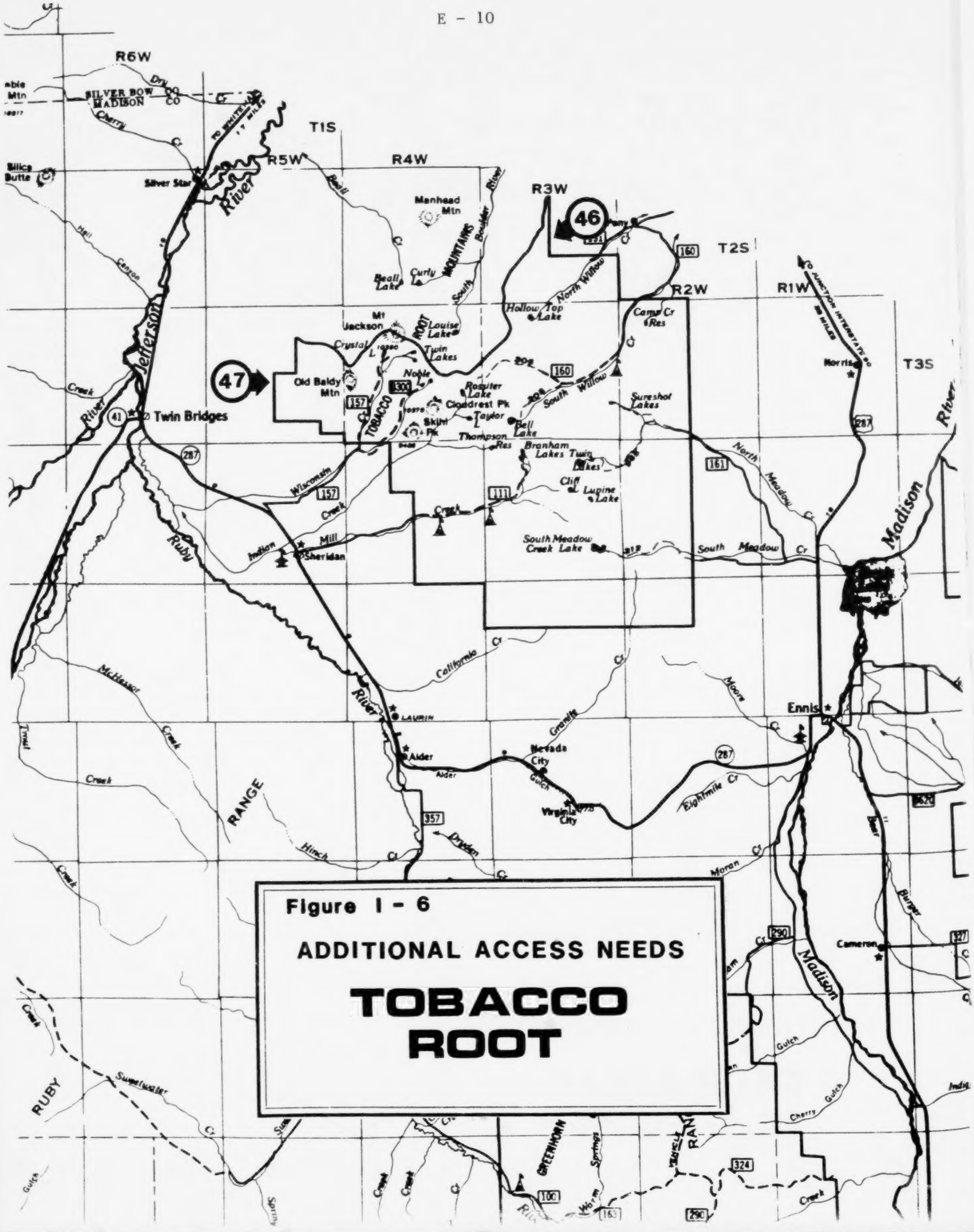

R6W
SILVER BOW CO
MADISON CO
T1S
R5W
R4W
R3W
46
T2S
R2W
R1W
T3S
47
Silver Star
Twin Bridges
Manhead Mtn
Mt Jackson
Old Baldy Mtn
Cloudrest Pk
Sureshot Lakes
South Meadow Creek Lake
Sheridan
Laurin
Alder
Nevada City
Virginia City
Norris
Ennis
Cameron
Jefferson River
Ruby River
Madison River
TOBACCO ROOT MOUNTAINS
RUBY RANGE
GREENHORN RANGE
287
157
160
161
287
357
290

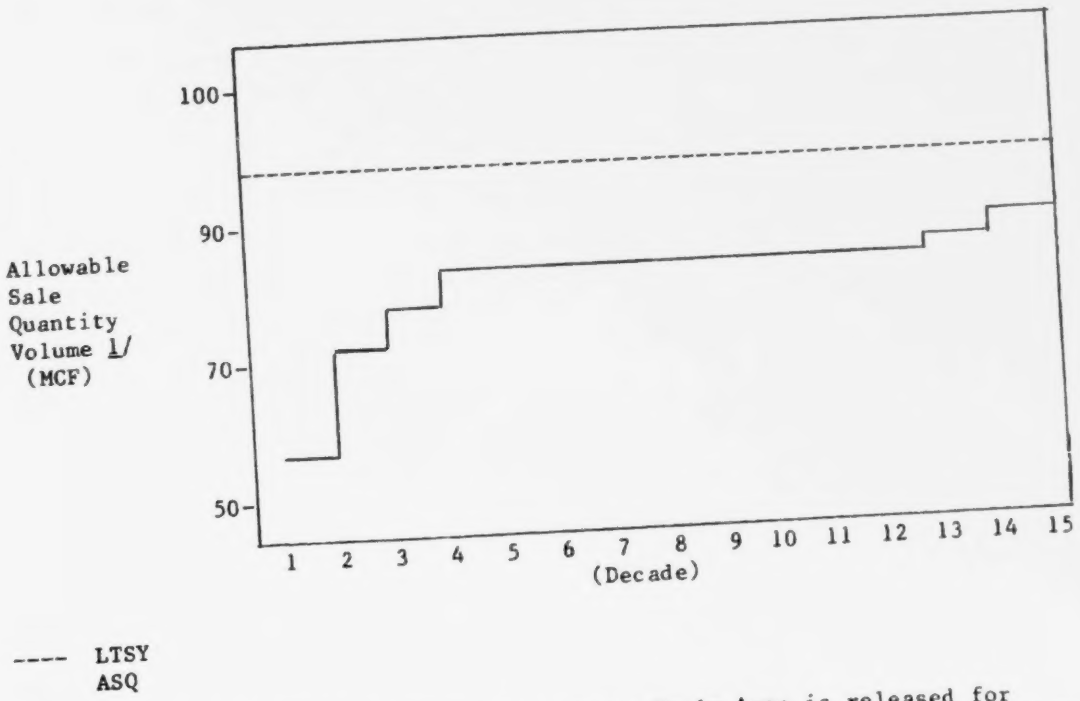
Figure I - 6

ADDITIONAL ACCESS NEEDS

TOBACCO ROOT

Appendix F

Display of Allowable Sale Quantity and Long-Term Sustained Yield Capacity



1/ If the West Pioneer Montana Wilderness Study Area is released for management, the Long Term Sustained Yield would be increased to 98 MCF per year and the Allowable Sale Quantity would be slightly higher. (Refer to the EIS).

APPENDIX G

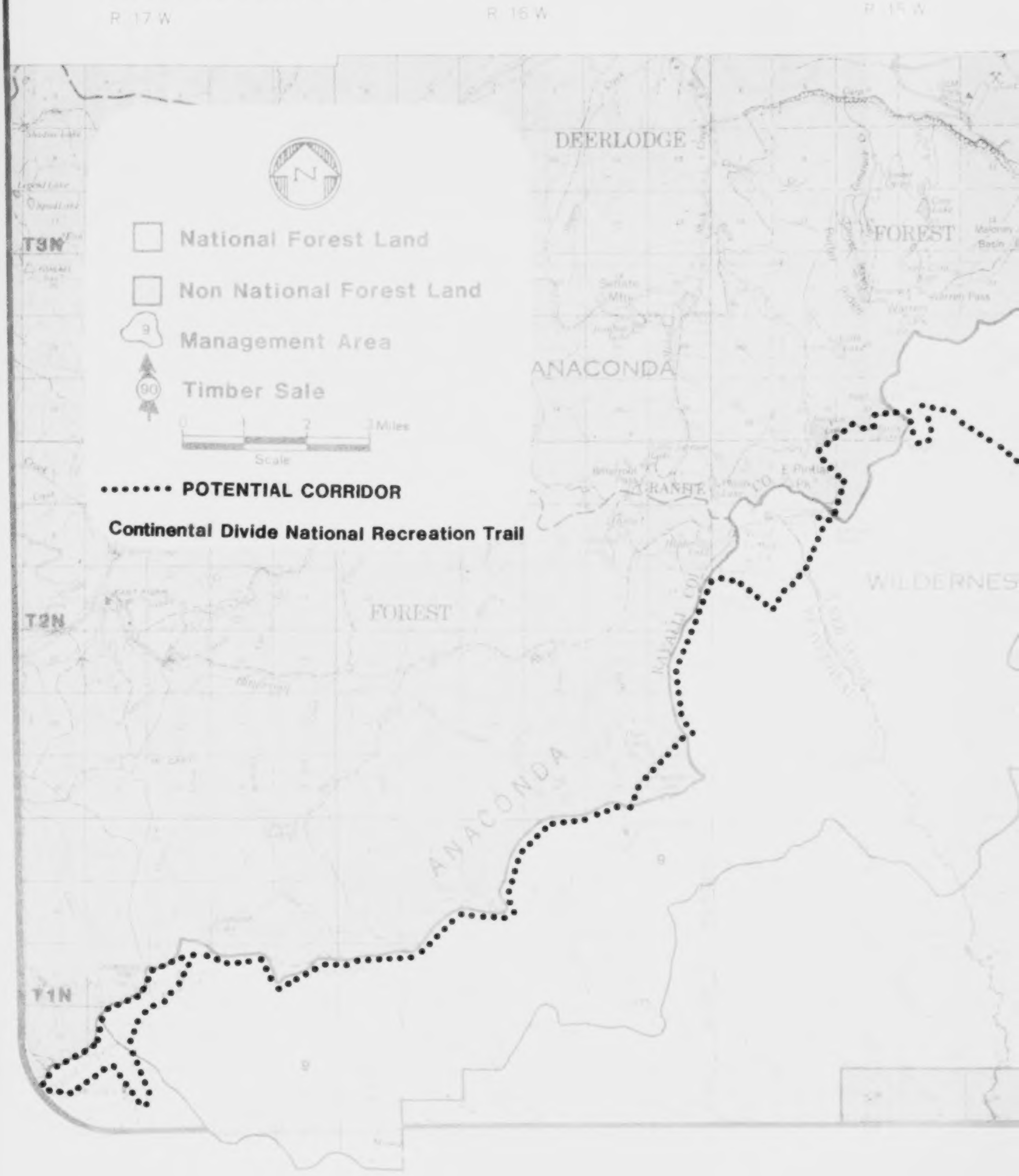
Continental Divide National Scenic Trail

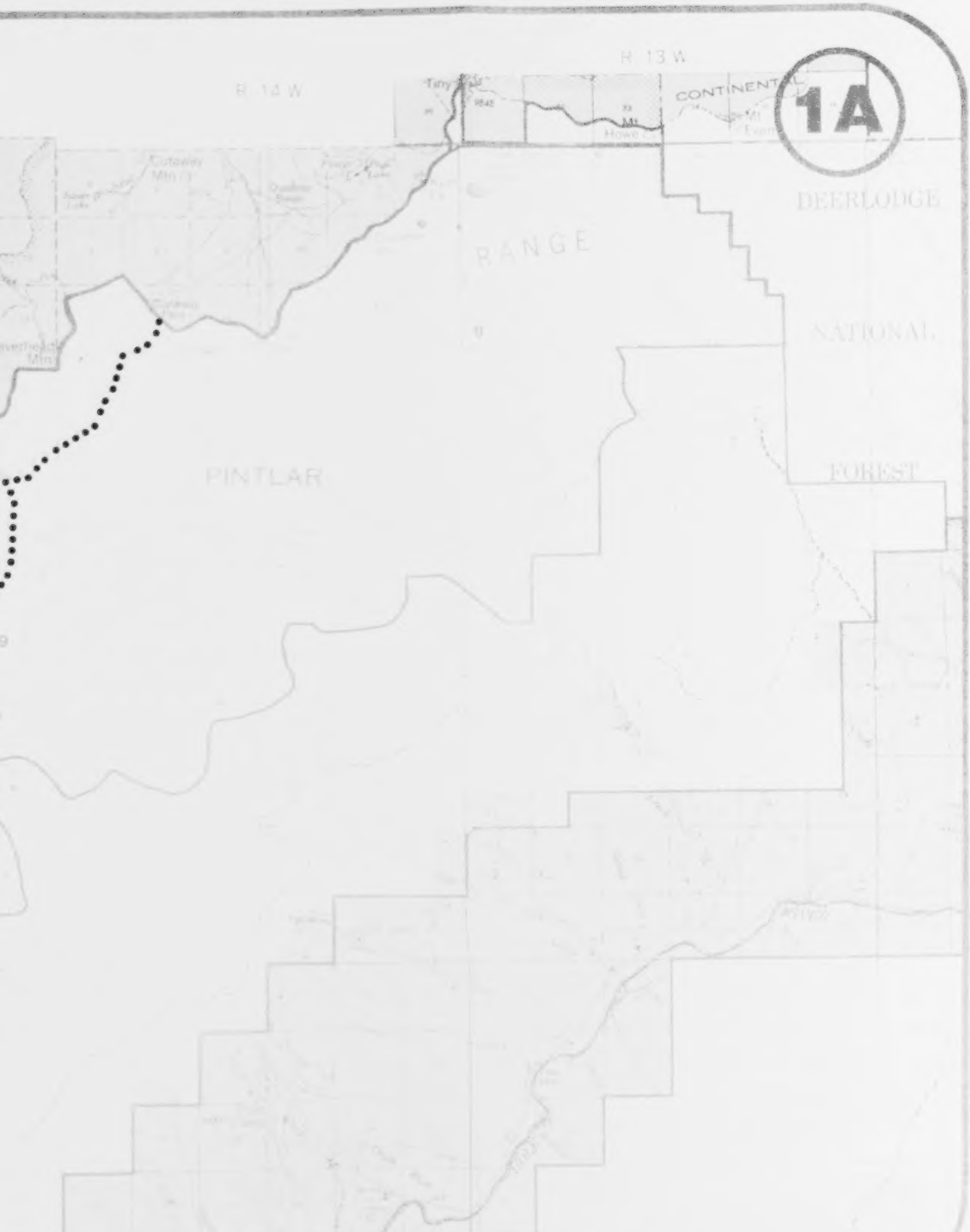
Potential Trail Corridors

The Continental Divide National Scenic Trail was established by Congress in P.L. 95-625. The trail is within Management Area 29. The maps in this Appendix display the potential locations for the Continental Divide Trail on Beaverhead National Forest. Portions of the trail will probably follow existing trails and roads along the Continental Divide; other sections will have to be developed. Potential trail locations will be considered in project planning activities. Potential trail locations have been coordinated with adjoining National Forests. Final route location will be done on approval of the Continental Divide National Scenic Trail Comprehensive Management Plan.

GEOGRAPHICAL DISPLAY AREA

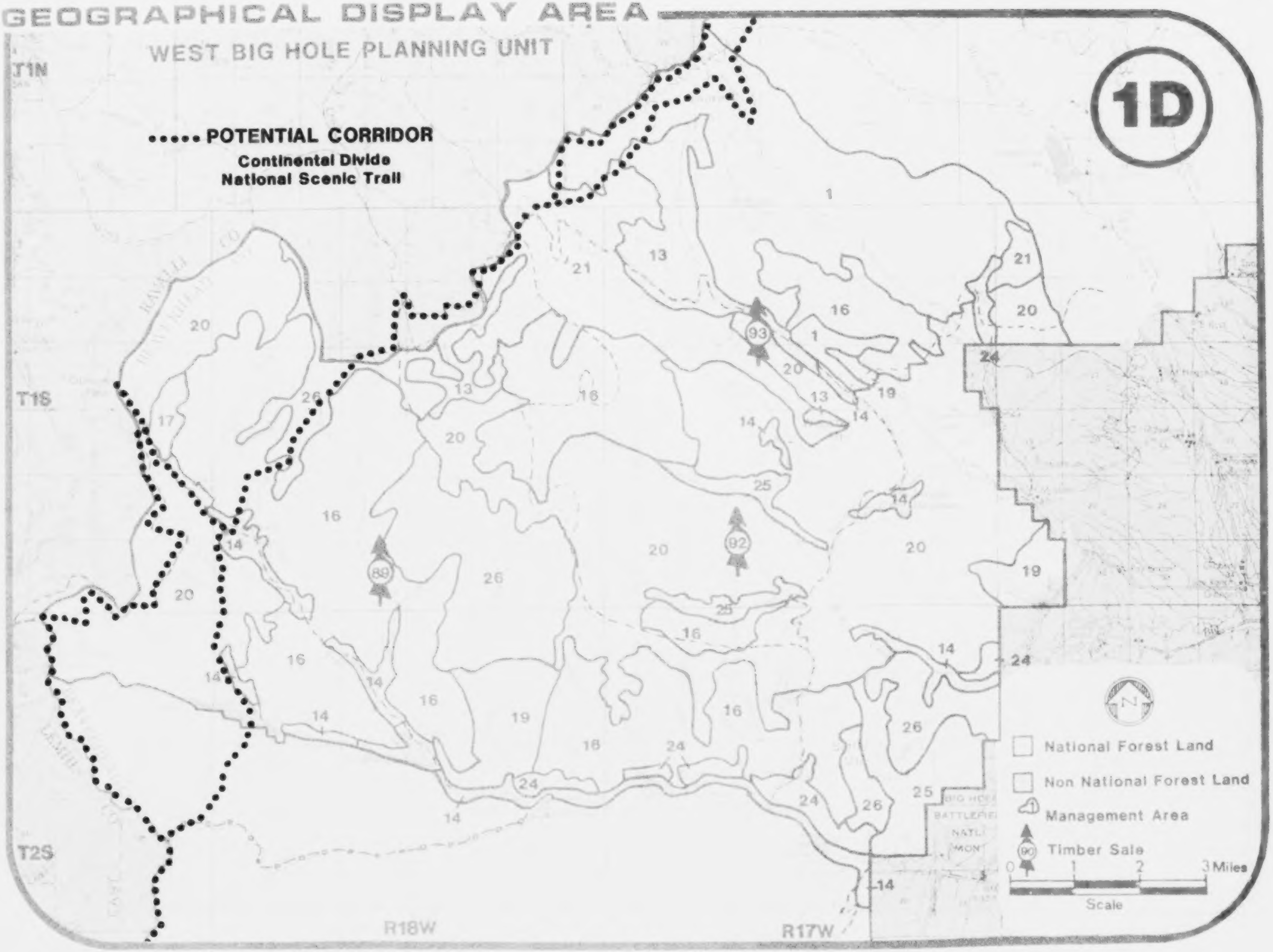
WEST BIG HOLE PLANNING UNIT


R 17 W
R 16 W
R 15 W
T3N
T2N
T1N
DEERLODGE
FOREST
ANACONDA
RANGE
CO
WILDERNES
FOREST
ANACONDA
9
9
N
National Forest Land
Non National Forest Land
9
Management Area
90
Timber Sale
0
1
2
3 Miles
Scale
•••••• POTENTIAL CORRIDOR
Continental Divide National Recreation Trail


R. 14 W
R. 13 W
1A
Tiny Peak
9845
CONTINENTAL
Mt Howe
Mt Evans
Cutaway Mtn
Queener Basin
Cutaway Pass
Mtn
DEERLODGE
NATIONAL
FOREST
RANGE
PINTLAR

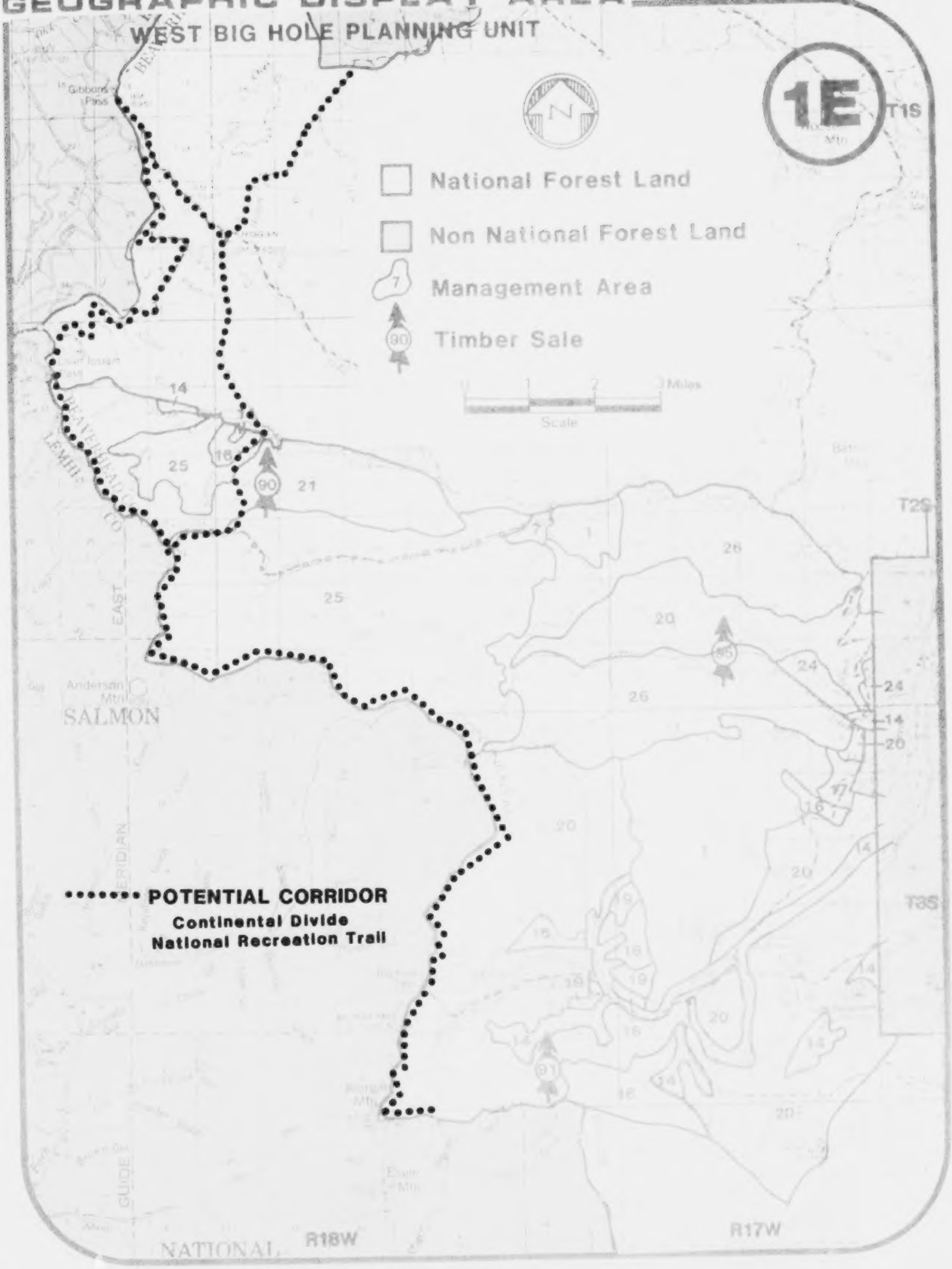
GEOGRAPHICAL DISPLAY AREA

WEST BIG HOLE PLANNING UNIT


1D
••••• POTENTIAL CORRIDOR
Continental Divide
National Scenic Trail
T1N
T1S
T2S
R18W
R17W
RAVALLI CO.
BEAVERHEAD CO.
LEMHI
1
13
16
20
21
24
19
14
25
26
17
18
93
92
88
BIG HOLE BATTLEFIELD NATL MON
N
National Forest Land
Non National Forest Land
Management Area
Timber Sale
0
1
2
3 Miles
Scale

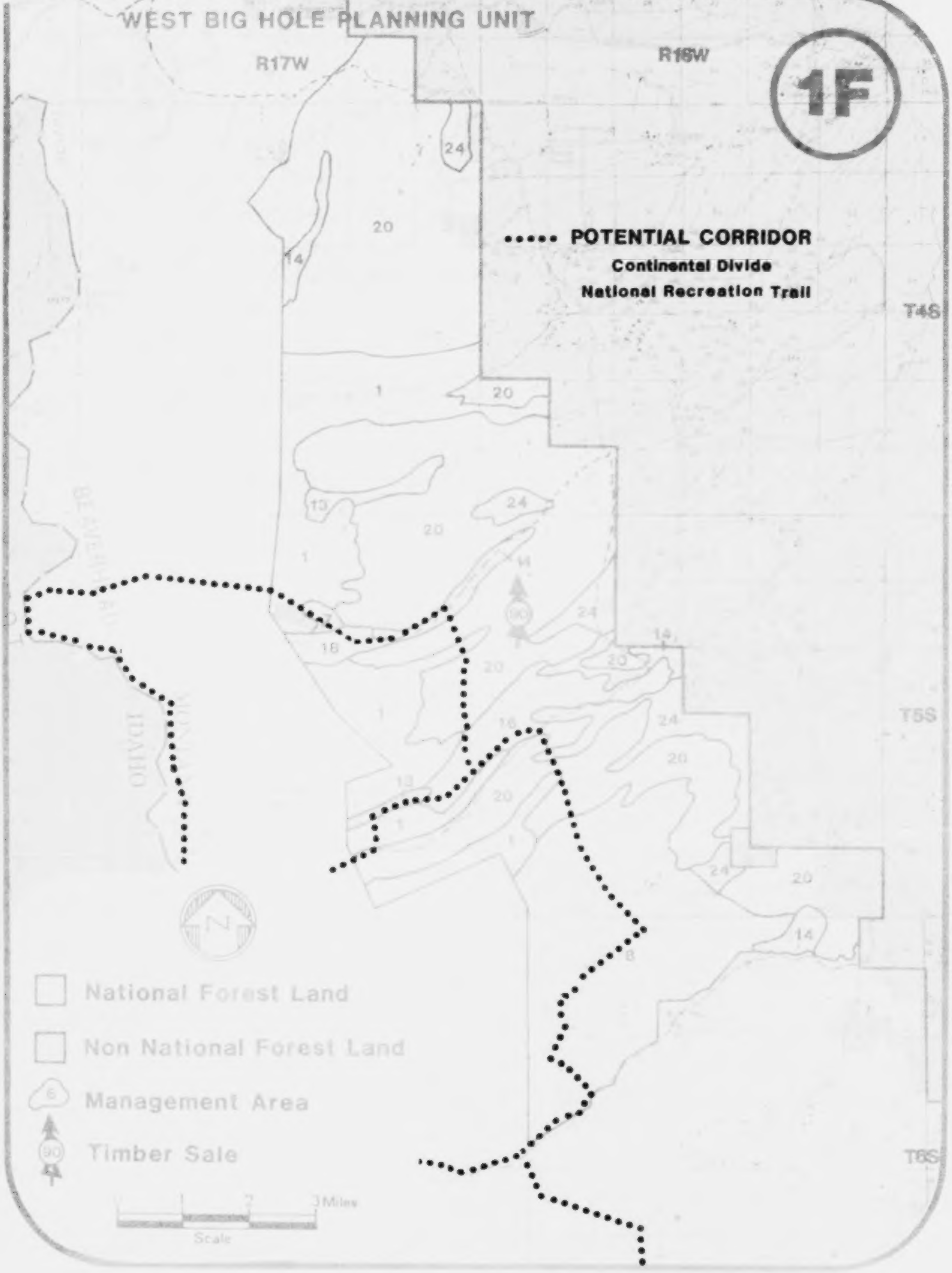
GEOGRAPHIC DISPLAY AREA

WEST BIG HOLE PLANNING UNIT


1E
T1S
T2S
T3S
N
National Forest Land
Non National Forest Land
7
Management Area
90
Timber Sale
0
1
2
3 Miles
Scale
Gibbons Pass
Chief Joseph Pass
BEAVERHEAD CO
LEMHI
EAST
MERIDIAN
GUIDE
NATIONAL
SALMON
Anderson Mtn
14
16
25
21
7
1
26
25
20
95
24
26
-24
-14
-20
17
16
20
14
20
19
16
18
19
19
16
20
14
14
91
24
16
20
R18W
R17W
POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail

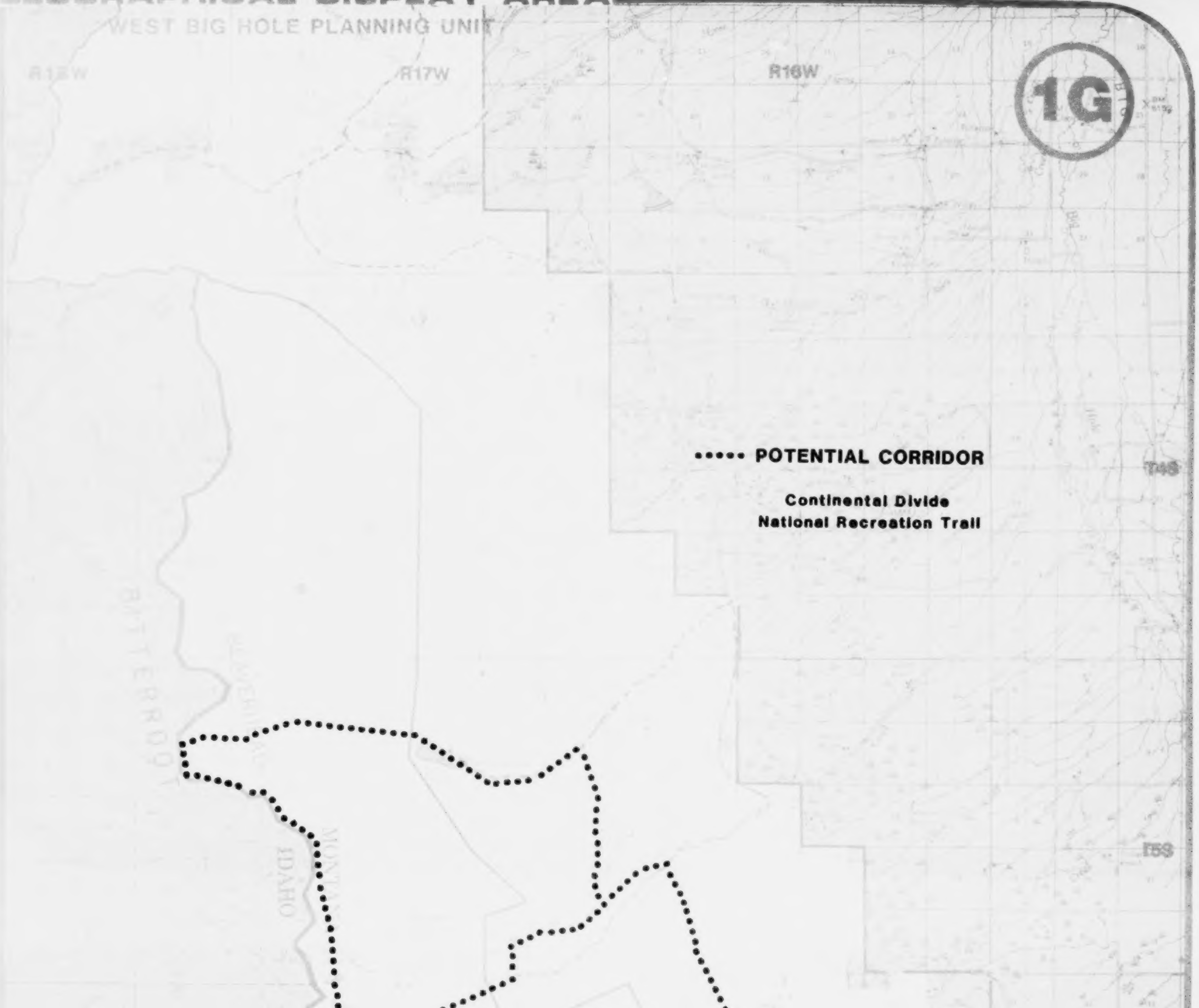
GEOGRAPHIC DISPLAY AREA

WEST BIG HOLE PLANNING UNIT

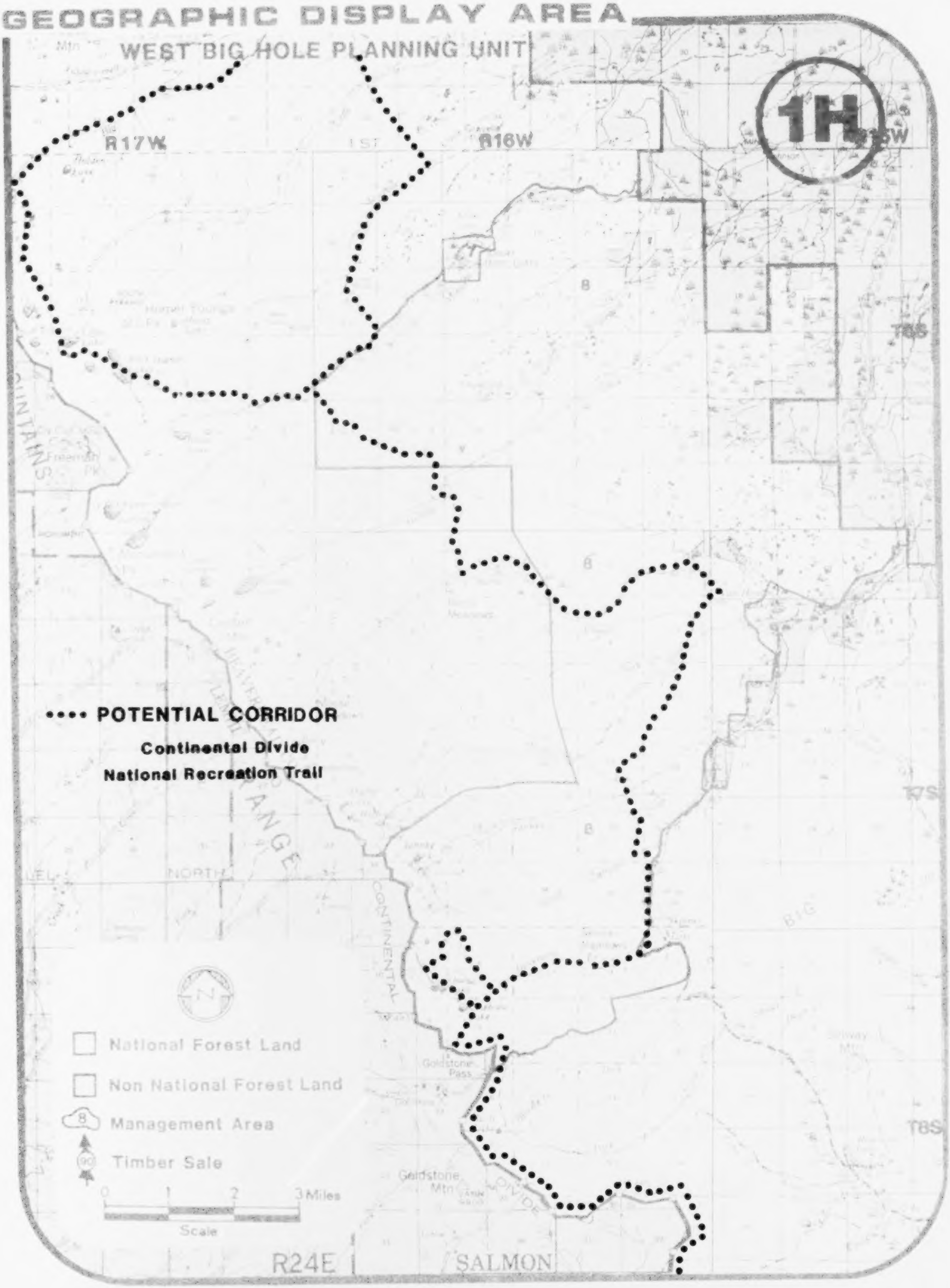

R17W
R16W
1F
•••• POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
T4S
T5S
T6S
24
20
14
1
20
13
24
20
1
14
90
24
16
20
14
20
1
16
24
20
13
20
1
1
24
20
14
8
IDAHO
MONTANA
National Forest Land
Non National Forest Land
6 Management Area
90 Timber Sale
1
2
3 Miles
Scale

GEOGRAPHICAL DISPLAY AREA

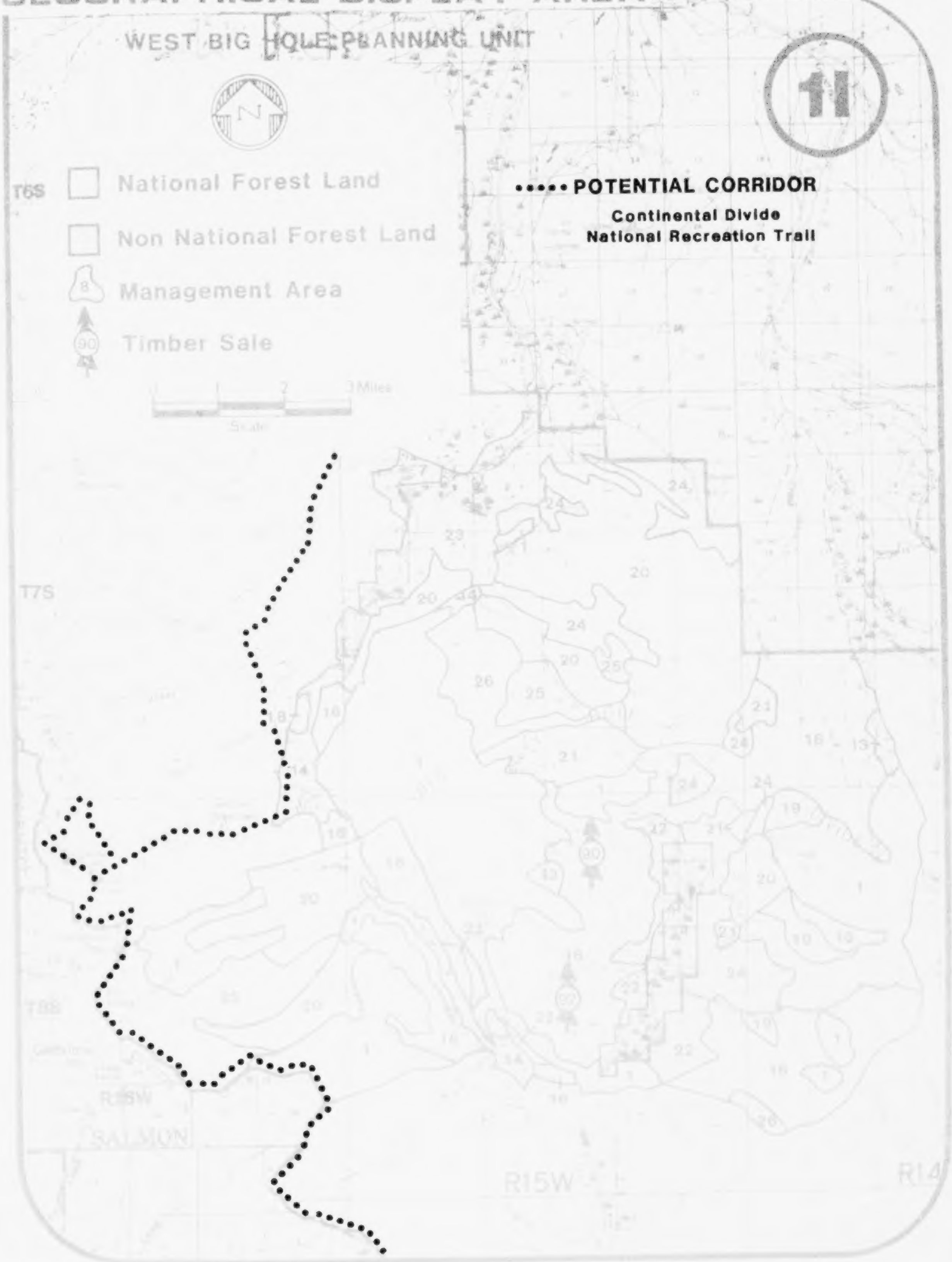
WEST BIG HOLE PLANNING UNIT


1G
R18W
R17W
R16W
T4S
T5S
••••• POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
MONTANA
IDAHO
BITTERROOT
BEAVERHEAD
Big Hole

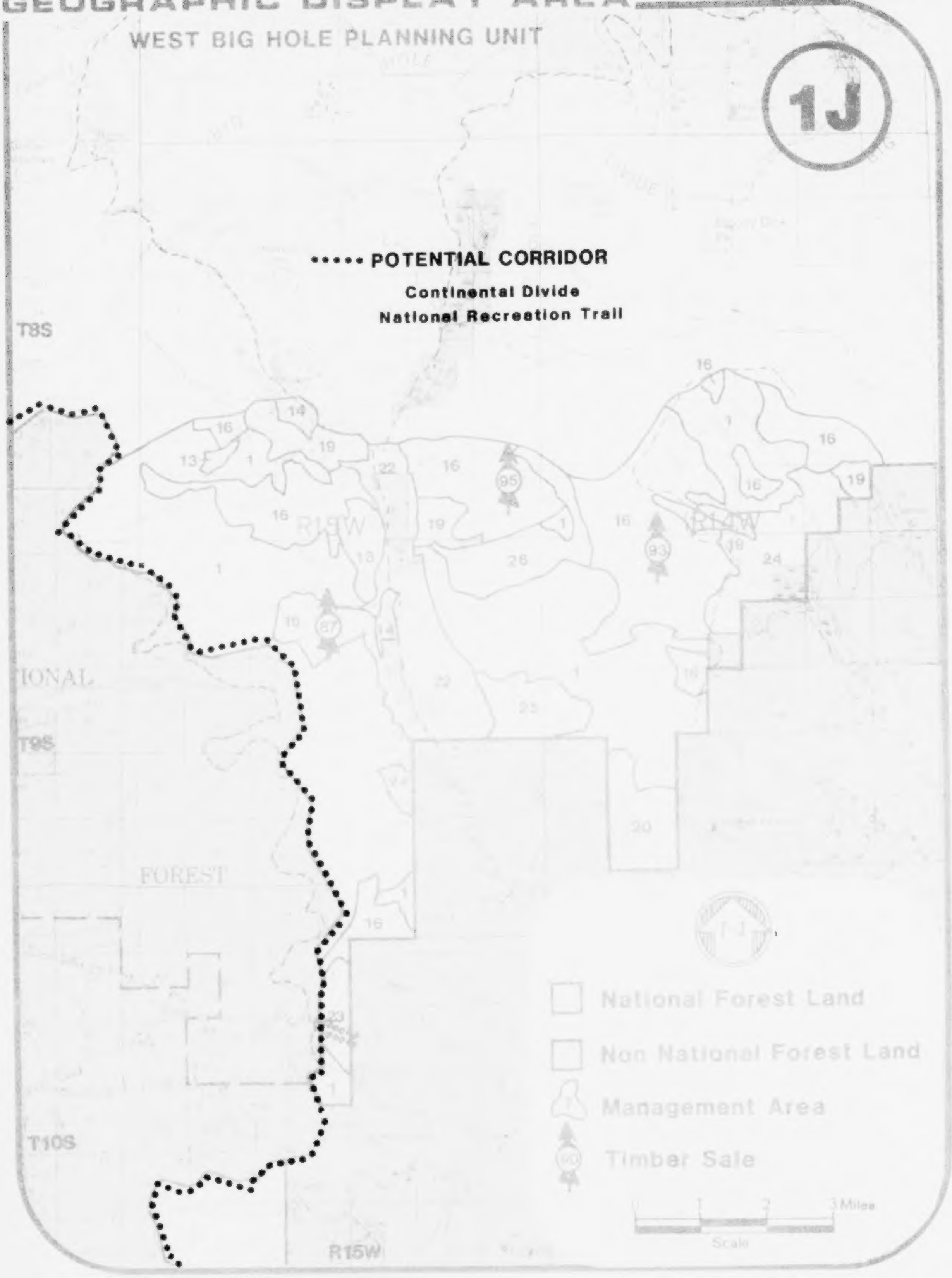
MOUNTAINS
RANGE
NORTH
T7S
National Forest Land
Non National Forest Land
Management Area
Timber Sale
2
Miles

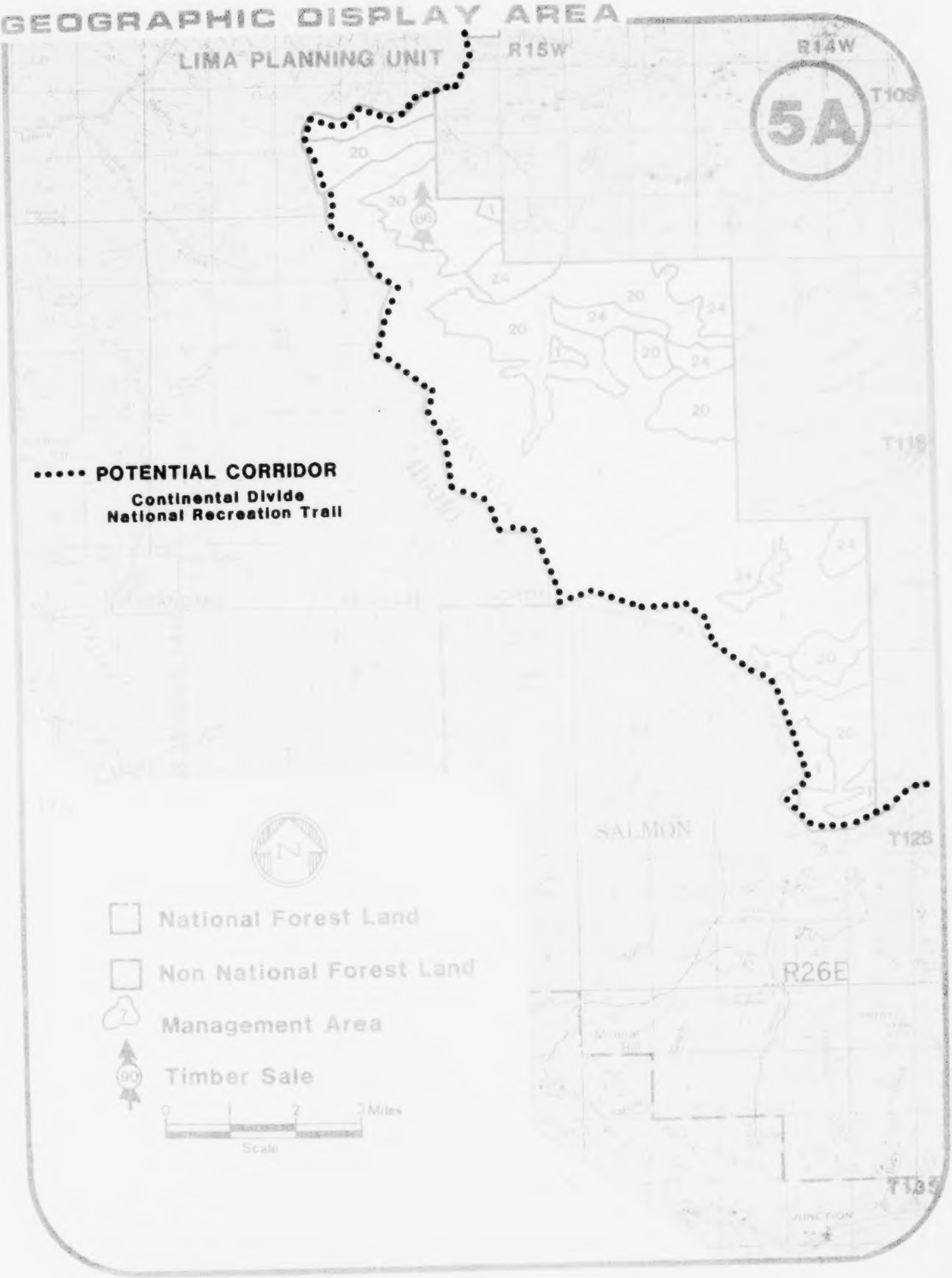

GEOGRAPHIC DISPLAY AREA
WEST BIG HOLE PLANNING UNIT
1H
R17W
1ST
R16W
R15W
T8S
T7S
T8S
8
8
8
Freeman Pk
MOUNTAINS
RANGE
NORTH
CONTINENTAL
DIVIDE
BIG
Goldstone Pass
Goldstone Mtn
R24E
SALMON
•••• POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
National Forest Land
Non National Forest Land
8 Management Area
90 Timber Sale
0
1
2
3 Miles
Scale

GEOGRAPHICAL DISPLAY AREA


WEST BIG HOLE PLANNING UNIT
11
N
T6S
National Forest Land
Non National Forest Land
8
Management Area
90
Timber Sale
0 1 2 3 Miles
Scale
••••• POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
T7S
T8S
R15W
SALMON
R15W
R14
7
23
24
20
24
26
25
25
21
21
24
18
16
14
16
18
20
24
22
21
19
20
90
22
20
13
25
20
1
16
22
14
22
22
18
26
19
16
13
1

GEOGRAPHIC DISPLAY AREA


WEST BIG HOLE PLANNING UNIT
1J
•••••POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
T8S
T9S
T10S
R15W
R14W
R15W
IONAL
FOREST
National Forest Land
Non National Forest Land
Management Area
Timber Sale
0
1
2
3 Miles
Scale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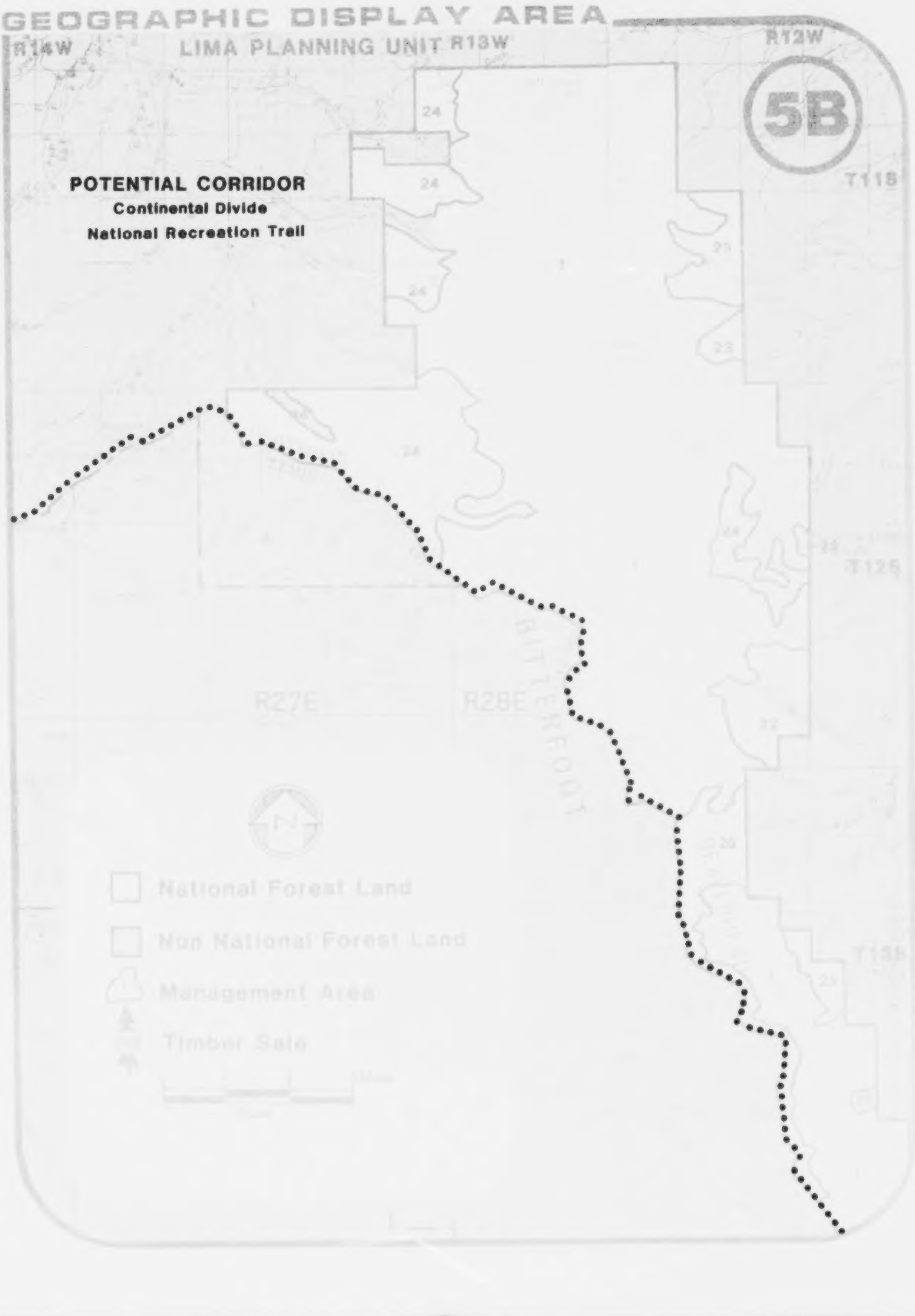
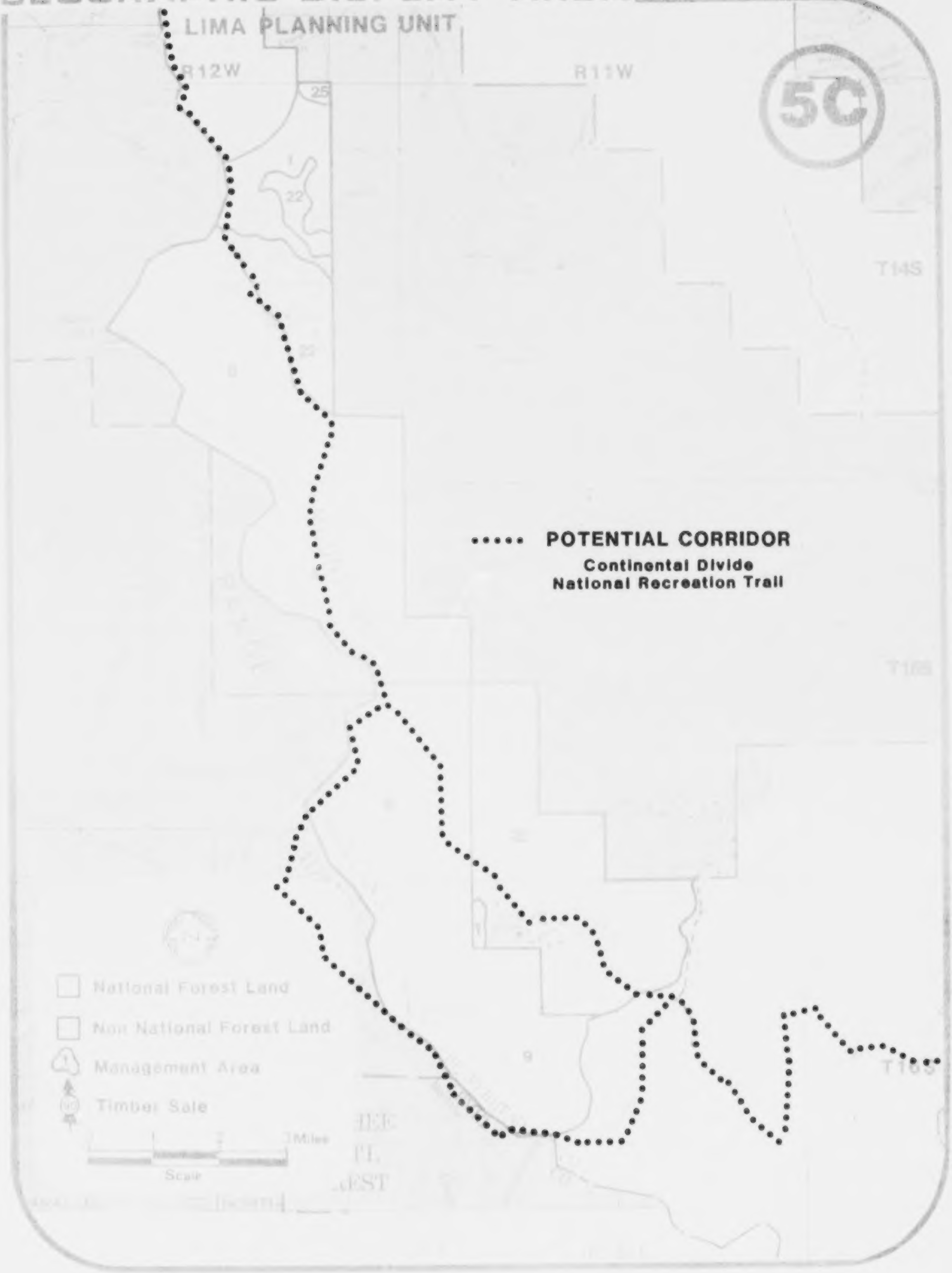
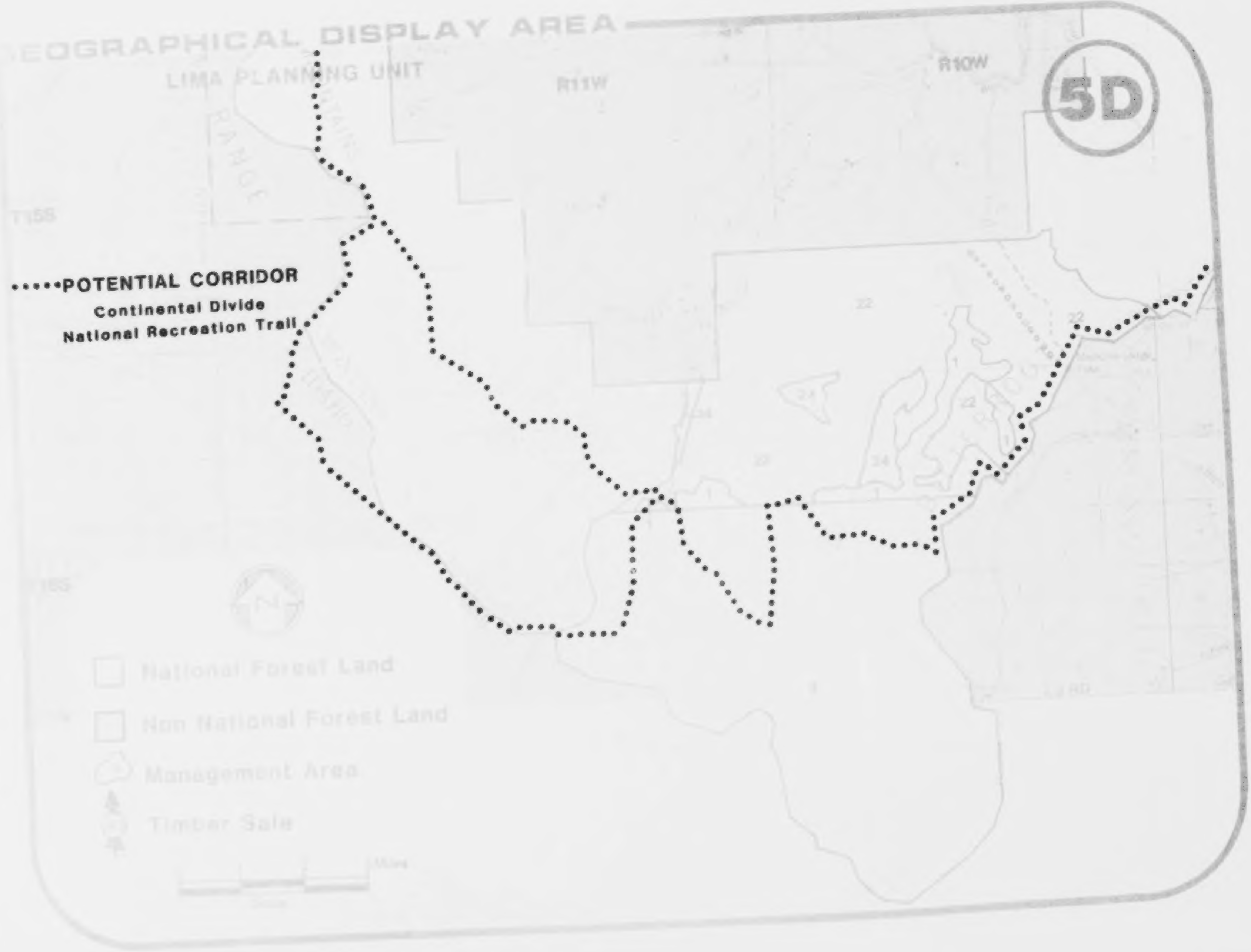
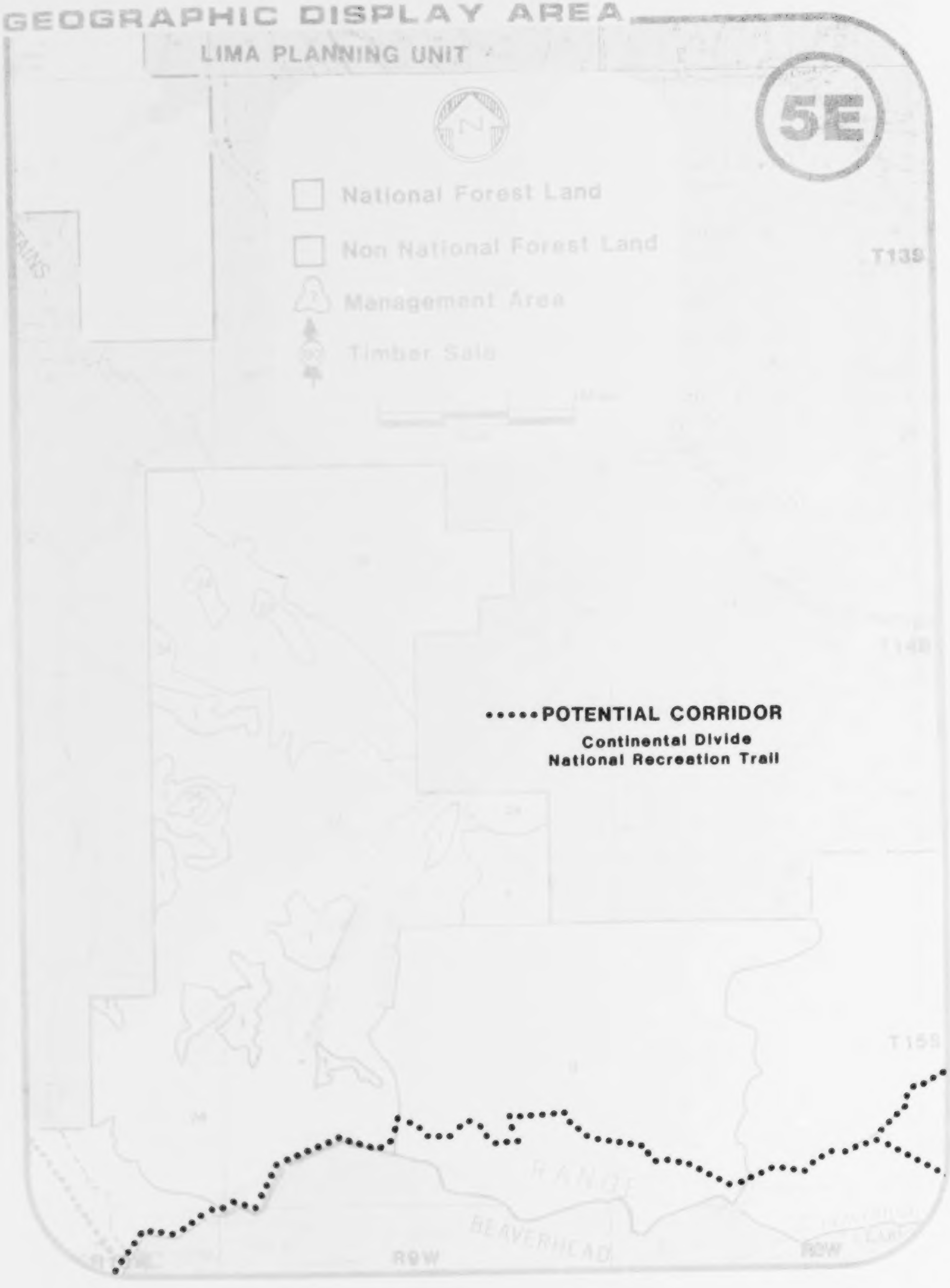
LIMA PLANNING UNIT
5A
R15W
R14W
T10S
T11S
T12S
T13S
R26E
SALMON
MONTANA
IDAHO
1
20
24
86
•••••• POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
National Forest Land
Non National Forest Land
Management Area
Timber Sale
0
1
2
3 Miles
Scale


GEOGRAPHIC DISPLAY AREA
LIMA PLANNING UNIT
R14W
R13W
R12W
5B
POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
T11S
T12S
T13S
R27E
R28E
BITTERROOT
24
24
24
24
23
23
1
24
22
22
26
23
National Forest Land
Non National Forest Land
Management Area
Timber Sale
N

GEOGRAPHIC DISPLAY AREA

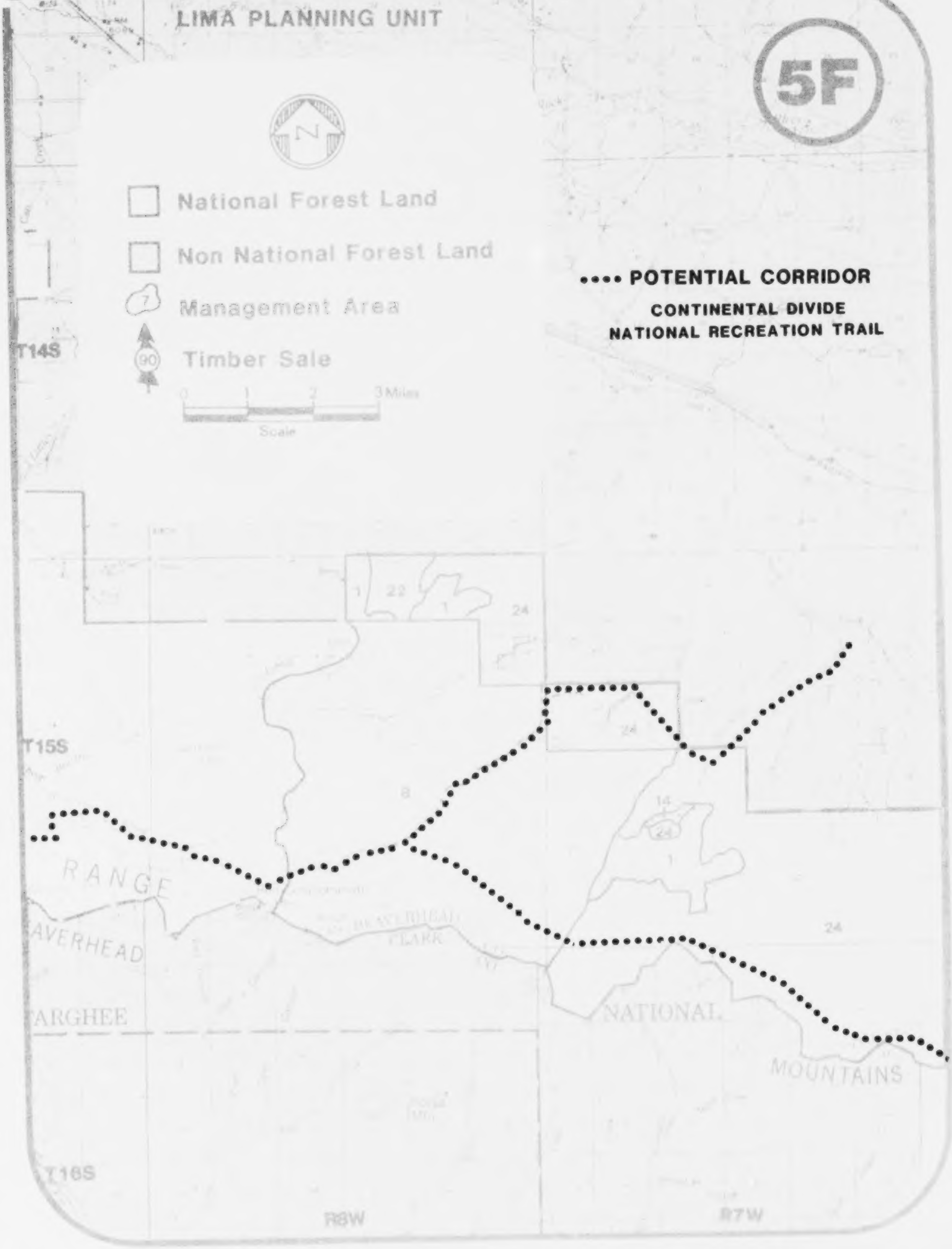

LIMA PLANNING UNIT
R12W
R11W
5C
25
1
22
22
8
T14S
T15S
T16S
9
••••• POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
National Forest Land
Non National Forest Land
Management Area
Timber Sale
Miles
Scale


GEOGRAPHICAL DISPLAY AREA
LIMA PLANNING UNIT
R11W
R10W
5D
T15S
RANGE
22
24
34
1
•••••POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
National Forest Land
Non National Forest Land
Management Area
Timber Sale
Miles


GEOGRAPHIC DISPLAY AREA
LIMA PLANNING UNIT
5E
National Forest Land
Non National Forest Land
Management Area
Timber Sale
T13S
T14S
T15S
•••••POTENTIAL CORRIDOR
Continental Divide
National Recreation Trail
RANGE
BEAVERHEAD
R9W
R8W

GEOGRAPHIC DISPLAY AREA

LIMA PLANNING UNIT


5F
National Forest Land
Non National Forest Land
Management Area
Timber Sale
90
7
0
1
2
3 Miles
Scale
•••• POTENTIAL CORRIDOR
CONTINENTAL DIVIDE
NATIONAL RECREATION TRAIL
T14S
T15S
T16S
R8W
R7W
1
22
1
24
24
8
14
24
1
24
RANGE
BEAVERHEAD
TARGHEE
NATIONAL
MOUNTAINS

Appendix H

Timber Productivity Classification

Potential Growth (cubic feet/acre/year)	Suitable Lands 1/ (acres)	Unsuitable Lands (acres)
Less than 20		494,030
20 - 49	248,620	549,880
50 - 84	89,720	102,590
85 - 119		
120 - 164		
165 - 224		
225+		

1/ Based on the potential biological growth of natural stands, with no consideration given to stocking control or other intensive management practices.

This appendix assumes that the West Pioneers are not available for management and therefore are included in the unsuitable acreage.

Appendix I

Present and Future Forest Conditions

	Unit of Measure		Suitable Land 4/	Unsuitable Land 3/
Present forest: Growing stock	MMCF		714.9	2,125.3
	MMBF		2,003.4	5,956.0
Live cull 2/	MMCF		4.7	14.0
	MMBF		14.7	41.9
Salvagable dead 2/	MMCF		139.2	413.0
	MMBF		417.6	1,241.5
Annual net growth	MMCF		.8	24.7
	MMBF		2.4	72.5
Annual mortality 2/	MMCF		3.5	10.4
	MMBF			
Future forest: Growing stock	MMCF		468.8	
Annual net growth	MMCF		8.7	
Rotation age 1/	Years	70 to 120	Lodgepole Pine	
	Years	110 to 130	Mixed Conifer	
	Years	140	Riparian Areas	

Age class distribution acres (suitable lands)

Age Class	Present Forest	Future Forest
0-39	8,553	86,550
40-89	24,890	130,186
90-119	24,222	87,579
120-149	214,783	16,218
150-199	65,892	---
200+	---	17,807

1/ Average rotation age for regenerated stands on lands with timber emphasis by major forest types.

2/ Numbers are based on previous inventory statistics and are only an estimate of what current FORPLAN outputs might be.

3/ Figures based on average volumes of similar lands on suitable acres.

4/ If the West Pioneer Montana Wilderness Study Area were released for management, figures would reflect values based on an additional 22,000 suitable acres.

Appendix J

Vegetation Management Practices

The final decision for the vegetative management practice (silvicultural system) chosen for each vegetative type and circumstance shall be made by a certified silviculturist using guidance in this Appendix, a review of applicable technical and scientific literature, and practical experience. Using this knowledge, the silviculturist will evaluate the practice for relevance to the specific vegetation and site conditions.

Practices described in this section are general guidelines. Variances will occur to meet specific Management Area goals or to manage specific site conditions.

Harvest Systems

The Forest contains four general vegetative types. Each vegetative type provides several options for harvest systems depending on site conditions, phenological characteristics of individual species and management goals. Shelterwood harvest referred to in this section relates only to the seed cut of a shelterwood silvicultural system. This step of a shelterwood system is designed to provide seed for natural regeneration and/or to provide shelter for planted or naturally regenerated seedlings. Appropriate harvest systems for each type are as follows:

Lodgepole Pine

These sites generally occur on alpine fir or Douglas-fir climax habitats. Sites are generally dominated by pure or nearly pure lodgepole pine stands.

Clearcut - Where timber production is the primary goal for the area, and lodgepole pine is the desired managment species, clearcutting will generally be used. Lodgepole pine is very shade intolerant and produces maximum seed germination and growth in full sunlight conditions.

Shelterwood - This harvest method may be used where conversion to more shade tolerant species such as Spruce or Douglas-fir is desirable, and where shelter is necessary to protect regeneration. Lodgepole pine will generally not be retained as shelter trees due to its' high susceptibility for windthrow.

Seedtree - harvest may occur on sites where conversion to more tolerant species is desirable. In these cases residual seed trees will generally be Spruce or Douglas-fir.

Lodgepole pine may be retained as seed trees on sites where cone serotony is poor and sufficient seed is not present in the logging slash to adequately regenerate the site following harvest. Due to the high susceptibility of lodgepole pine seedtrees to windthrow, this method should be used where the risk is low.

Lodgepole pine containing seed bearing cones may be retained as seed trees on stands where broadcast burning is used to dispose of slash. This method may be used as a one-shot attempt to establish natural regeneration as seedtrees will normally be killed by the fire. These sites should be scheduled for planting if first year regeneration surveys do not show adequate stocking.

Selection/Group Selection - Lodgepole pine types are generally not well suited for unevenaged silvicultural systems where lodgepole pine is the desired species of regeneration. Hormonal respones to shaded sunlight prevent germination of lodgepole pine seed and restricts root growth in existing trees in shaded or partially shaded conditions. These methods may be used where other resource goals dictate continuous site occupancy with trees and where conversion to more tolerant species is desirable or acceptable.

Douglas-fir

These stands generally occur on Douglas-fir climax habitats and are characterized by species compositions ranging from a mixture of Douglas-fir and lodgepole pine to pure Douglas-fir.

Clearcut - This harvest method may be used on sites where existing stands do not contain sufficient suitable seed or shelter trees. This may occur due to disease, infestation with insects or genetic undesirablility of available trees. Sites harvested using this method will generally be scheduled for planting.

Shelterwood - This harvest method will generally be used on sites where the retention of shelter trees is necessary to protect regeneration from excessive drying of the site or where continuous site occupancy with trees is necessary to protect other resource values. Where timber production is the primary goal of the area, the shelter trees will generally be removed after the regeneration is well established (10 to 20 years). Douglas-fir is considered a moderately shade intolerant species and produces greater growth under full sunlight conditions. On sites where the shelter trees are retained to protect other resource values, shelter trees may be retained on the site for a longer period of time, or not removed at all.

Seedtree - This harvest method will be used on sites where the retention of shelter trees is not necessary to protect regeneration or other resource values. The retention of seedtrees provides seed for natural regeneration while retaining near full sunlight conditions to maximize growth. Seed trees will generally be removed from the site after sufficient desirable regeneration is established.

Selection/Group Selection - On very dry or harsh sites where regeneration of the site is difficult and stockability is low, selection harvest may be the most appropriate method of assuring continued regeneration of the site. These systems may also be used where other resource goals dictate continuous site occupancy with trees, and where full stocking of stands is not required.

Spruce/Sub-alpine fir

These stands generally occur on relatively high elevation sub-alpine-fir climax habitat types and are characterized by a species mixture of sub-alpine-fir, spruce, and whitebark pine. These sites often are not suited for regulated timber management due to harsh site conditions but may be managed where adequate site protection and regeneration can be assured or to meet other resource goals.

Clearcut, Shelterwood, Seedtree - Even-aged harvest may be used to manage these sites where individual site and stand conditions allow and successful regenereration is likely to occur.

Selection/Group Selection - On harsh sites where regeneration of the site is difficult and stockability is low, selection harvest may be the most appropriate method of assuring continued regeneration of the site. These systems may also be used where other resource goals dictate continuous site occupancy with trees, and where full stocking of stands is not required.

Riparian

These areas occur along streams and wet meadows. Existing stand conditions are highly variable, ranging from even-aged lodgepole stands to all-aged, multi-storied, mixed species stands. Harvest treatments will be designed to maintain natural stand conditions, protect riparian values, and to provide recruitment of trees to streams for pool development.

Selection/Group Selection - These harvest methods will be used in riparian areas to manage the timber resource while protecting other resource values. Selection harvest may be used where the desired management species is shade tolerant and regeneration of that species is likely to occur. On sites where the desired management species is shade intolerant, such as lodgepole pine, group selection will generally be used to create conditions favorable for regeneration and growth. Group selection units will generally not exceed five acres in size.

Clearcut, Shelterwood, Seedtree - systems will normally not be utilized in riparian areas. Exceptions may occur where riparian values can be adequately protected.

Site Preparation/Slash disposal

Site preparation/slash disposal will be scheduled for all harvested units where logging slash creates an untenable fire hazard and/or where site conditions inhibit reforestation efforts. Methods of site preparation/Slash disposal to be utilized include the following:

Tractor Piling - will generally be scheduled following harvest on sites where slopes are less than 45% and soils are not sensitive to erosion or compaction.

Hand Piling - Will generally be scheduled on harvested units containing sensitive soils or where small unit size makes hand piling more cost efficient than other methods.

Trampling - May be used on sites where logging slash will not create an undue fire hazard and trampling will accomplish adequate site preparation to allow the prescribed type of regeneration.

Broadcast Burning - may be used on sites where other methods are not feasible due to slopes exceeding 45% or on sensitive soils where mechanical methods would create undue soil disturbance or compaction.

YUM Yarding - Yarding of Unmerchantable Material may be appropriate where whole tree yarding is planned or where other methods will cause undue soil disturbance.

Jackpot Burning - may be used where fuels are scattered and site preparation is adequate to provide for regeneration.

Herbicide Treatment - may be used where competing vegetation precludes regeneratation and mechanical methods of removing the competing vegetation are infeasible or cost prohibitive. Use of herbicides will be preceeded by an approved environmental analysis and disclosure document.

Reforestation

Natural Regeneration

Natural regeneration will be the primary system of reforestation were the following conditions exist.

1. Following clearcut harvest on lodgepole pine sites where adequate cone serotony exists and subsequent slash disposal/Site preparation methods are compatible.
2. Following all seed tree harvest.
3. Following selection and group selection harvest where desirable tree species are expected to regenerate.

4. Following shelterwood harvest where regeneration of desirable species is expected.

Planting

Planting will generally be scheduled on sites where natural regeneration is unlikely to occur within five years of final harvest. Site conditions which generally indicate the need for planting include but are not limited to the following:

1. Following clearcut harvest on Douglas-fir sites where Douglas-fir is the desired regenerated species.
2. Following clearcut harvest on Lodgepole pine sites where cone serotony is poor or sites must be broadcast burned to dispose of logging slash due to steep slopes.
3. Following shelterwood harvest were natural regeneration is not expected within five years due to harsh site conditions.
4. Planting will be scheduled on all sites where third year regeneration surveys indicate that natural regeneration will not result in adequate stocking within five years of final harvest.

Timber Stand Improvement

Precommercial thinning, cleaning, release and weeding will be used on seedling/sapling sized stands. Treatments will be designed to reduce overstocking to increase growth, remove diseased, damaged, or genetically inferior trees or to control species compositions. Treatment will be scheduled prior to growth loss due to stagnation but after the possibility of significant ingrowth has past, generally between twenty and thirty years of stand age. Residual stocking levels, species preference and timing of treatment will be specified in the silvicultural prescription.

APPENDIX K

The following schedule is intended to display the proposed timber sales to be offered to the public during the next decade. The timber sale program is subject to revision upon approval by the Forest Supervisor. The small sales component is not subject to this approval since they are sold under the District Ranger's authority. Each year, the Forest reviews the Timber Sale Program, makes any necessary adjustments, and adds another year's sales to the schedule. Abbreviations used in the tables are as follows:

D1 = Dillon Ranger District
D2 = Wise River Ranger District
D3 = Wisdom Ranger District
D6 = Sheridan Ranger District
D7 = Madison Ranger District

Con = Construction of New Roads
Recon = Reconstruction of Existing Roads

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1986

FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	ROAD MILES Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Wellman 2C 139 MA 16 S 33 T4S,R12W	106	1.0	2.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding.
D1 Frying Pan 5A 128 MA 20 S 33 T10S,R15W S 1-11 T11S,R15W	300	2.7	6.1		Lodgepole - Clearcut Tractor Yarding.
D1 Buffalo II 2C 142-144 MA 19,20,26 S.4-9,17-21,29-32 T5S,R13W	460	1.5	3.5		Lodgepole - Clearcut Tractor Yarding.
D2 Elkhorn 2E 218,219,225,226 MA 18 S.32-34 T3S,R12W S.2-11 T4S,R12W	310	3.4	6.0		Lodgepole - Clearcut Tractor Yarding.
D2 Trapper 2I 252 MA 16,17 S.29-31,T2S,R10W S.36,T2S,R11W	110	.9	2.0	1.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding.
D2 Foolhen 2J 210 MA 16 S.18,30,31,T1N,R12W S.24,25,36 T1N,R11W	170	1.6	1.0	2.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D3 Doolittle 2A 306,307 MA 16,20,21 S.23,26,27,34-36 T1S,R14W S.3,4,9,10,15,16,21,22 T2S,R14W	689	6.1	15.0	7.0	Lodgepole - Clearcut Tractor and Cable
D1 Small Sales		.9			Varied
D2 Small Sales		.5			
D3 Small Sales		2.0			
D6 Small Sales		.1			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FOREST Beaverhead

FISCAL YEAR 1987

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	 Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Kitty Creek 1J 124,127 MA 16 S 4,9,10,15 T9S,R15W	100	.6	2.3		Lodgepole - Clearcut Tractor Yarding
D2 Adson 2I 235 MA 16 S.28-30,32,33 T1S,R11W	240	1.9	3.0		Douglas-fir -Shelterwood and Clearcut Tractor Yarding.
D3 Howell 1L 311 MA 20 S.15,16,21,22 T1N,R15W	150	1.2	1.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D7 Bozelle 6G 709,710 MA 16,21 S.5-9,16-21,29-32 T11S,R1E S.11-14,23-25,36 T11S,R1W	1001	14.0	4.7	8.5	Lodgepole - Clearcut Tractor Yarding
D1 Small Sales		1.0			
D2 Small Sales		.5			
D3 Small Sales		2.0			
D6 Small Sales		.1			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1988

FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA)	AREA	VOLUME	ROAD MILES		PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
Sec., Township, Range	Acres	MMBF	Con	Recon	
D1 Andrus 1K 146,147,121 MA 16,19,20,26 S 13,14,23,24-36 T7S,R14W S 4,5,6,9 T8S,R14W	863	5.0	7.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Swamp Creek 2I 236 MA 16,20 S.10,14-16,21-23,T1S,R11W	200	1.5	2.0	2.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Harriet Lou 2J 233 MA 20 S.36,T1N,R12W S.1,2,11-14 T1S,R12W	250	1.8	3.0	2.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D3 Squaw Papoose 2A 307-309 MA 21 S.2,3,9-16,21,22 T1S,R14W	696	3.5	8.4		Lodgepole - Clearcut Tractor Yarding
D6 Middle Fork 6A 611 MA 20 S.28-33 T9S,R2W S.24,25 T9S,R3W	220	2.7	8.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D6 Bivens 4B 606 MA 19 S.31,32 T4S,R3W	110	.7	1.3	.8	Douglas-fir Clearcut and Shelterwood Tractor Yarding
D7 Virginia Creek 4C 742 MA 20 S.28-33 T4S,R2W S.4,5 T5S,R2W	175	1.2	2.0		Douglas-fir Shelterwood and Clearcut Tractor Yarding
D1 Small Sales		.5			
D2 Small Sales		.4			
D3 Small Sales		1.0			
D6 Small Sales		.1			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1989

FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	 Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Price Creek 2C 140 MA 16 S 7-9,15-23,27,28,32,33 T4S,R12W	460	2.8	4.0		Lodgepole - Clearcut Tractor Yarding
D1 Thief Creek 2H 114 MA 16 S 7,8,17,18 T5S,R10W	135	.8	1.0		Lodgepole - Clearcut Tractor Yarding
D2 Walker Moose 2A 208 MA 16,20 S.1-3,10-12,14,15 T1N,R13W	350	2.4	6.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D2 Buffalo Triangle 2I 248 MA 16,20 S.17-20,29-32 T1S,R10W S.24,25,36 T1S,R11W S.13-15,22,23 T2S,R11W	330	2.3	5.0		Lodgepole - Clearcut Clearcut - Shelterwood Tractor Yarding
D3 Sheep Trail 1D 323-325 MA 16,20 S.16,17,20-22,26-29,32-35 T1S,R18W S.2-5,9-11,13-15 T2S,R18W	990	6.0	22.0		Lodgepole - Douglas-fir Shelterwood and Clearcut Tractor and Cable
D1 Small Sales		.5			
D2 Small Sales		.4			
D3 Small Sales		2.0			
D6 Small Sales		.1			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1990 FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	 Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Hidden Ore 1I 120 MA 16,20 S 33-35 T7S,R15W S 2-4,9-11,14,15 T8S,R15W	400	2.0	3.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Canyon Creek 2I 250 MA 16 S.12,13,23-28,33,34 T2S,R11W	90	.7	1.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Mudd Creek 1C 245,246 MA 16,26 S.18-34 T2N,R14W S.4,5 T1N,R14W	537	3.2	6.0	2.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Pintler 1C 247 MA 16,18,26 S.2,11,13,14,23,24 T1N,R15W	100	.7	1.0		Lodgepole - Clearcut Clearcut - Shelterwood Tractor Yarding
D3 Sawmill 1F 134,136 MA 20 S.31,32 T4S,R16W S.5-8,16-22,27-29 T5S,R16W S.1,2,11-13 T5S,R17W	653	2.5	10.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D3 Chief Joseph 1E 326 MA 21 S.7,15-22 T2S,R18W S.10-14,24 T2S,R19W	487	2.5	11.4		Lodgepole - Clearcut Tractor Yarding
D6 Gibbs 4B 607 MA 16,20 S.1-3,11,12 T5S,R3W	200	2.0	5.0	1.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D1 Small Sales		.5			
D2 Small Sales		.4			
D3 Small Sales		1.0			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FOREST Beaverhead

FISCAL YEAR 1991

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA	VOLUME	ROAD MILES		PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
	Acres	MMBF	Con	Recon	
D1 South Bighole 1K 136,145 MA 16 S.17-21,28-31 T6S,R13W	403	2.0	5.0		Lodgepole - Clearcut Tractor Yarding
D2 Toomey Creek 2A 202,203 MA 20 S.21,22,27-34 T1N,R13W S.3-6,8-10 T1S,R13W	310	2.3	5.0	2.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Hungry Hill 3A 202,203 MA 16,17 S.19,29,31,32 T2N,R10W	180	1.4	4.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D3 Cow Moose 1E 329,331,332 MA 16,20 S.1-3,10-16,21-28,33-36 T3S,R18W S.7,18,19,30-35 T3S,R17W S.1-6,9-12 T4S,R17W	1433	7.5	32.1		Lodgeple - Clearcut Douglas-fir Shelterwood and Clearcut Tractor and Cable
D1 Small Sales		1.0			
D2 Small Sales		.4			
D3 Small Sales		1.3			
D6 Small Sales		.1			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1992 | FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	 Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Bloody Dick 1I 119,120 MA 16,19,20 S.14-16,21-23,27 T8S,R15W	600	3.0	2.0		Lodgepole - Clearcut Tractor Yarding
D2 Moose Woods 3A 207 MA 16,20 S.7,17-20 T2N,R11W S.12-15,22-24 T2N,R12W	288	2.3	5.0		Lodgepole and Douglas-fir Clearcut and Shelterwood Tractor and Cable Yarding
D3 Retie 1D 319,323 MA 16,20 S.16,19-21,28-33 T1S,R17W S.3-6,T2S,R17W	1068	4.0	8.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D3 Jackson 2B 301 MA 16,21 S.20-23,26-29,32-34 T4S,R14W	500	2.0	8.0		Lodgepole - Clearcut Tractor Yarding
D6 Greenhorn 6A 608 MA 20 S.4,8,9,16-18 T8S,R2W	340	2.4	6.5	3.0	Lodgepole - Clearcut Tractor and Cable Yarding
D1 Small Sales		1.0			
D2 Small Sales		.5			
D3 Small Sales		1.5			
D7 Small Sales		.5			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1993

FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	 Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Taylor 2G 116 MA 20 S.4-9,16,17,20,21 T6S,R11W	150	.7	1.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D1 Frog Pole 1J 126 MA 16 S.21,22,25-29,31-34 T8S,R14W S.4,6-9 T9S,R14W	310	1.7	4.0		Lodgepole - Clearcut Tractor Yarding
D2 Parker 3A 201 MA 16 S.10,11 T1N,R10W	166	1.0	2.0		Lodgepole - Clearcut Tractor Yarding
D2 Upper Bryant 2J 210 MA 16,18 S.24-26,35,36 T1N,R13W	250	1.5	4.0		Lodgepole - Clearcut Tractor and Cable Yarding
D2 Starlight 3A 202 MA 16 S.7-9,16-21,28 T2N,R10W	235	1.8	3.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D2 Granulated 3A 204 MA 20 S.10,11,15,16 T1N,R11W	70	.4	.5		Douglas-fir Shelterwood Tractor Yarding
D3 Bender Johnson 1D 316-318 MA 16,20 S.31,32 T1N,R17W S.3-18,24 T1S,R17W S.1,6 T1S,R18W	600	4.5	7.5		Lodgepole - Clearcut
D1 Small Sales		1.4			
D2 Small Sales		.5			
D3 Small Sales		2.0			
D6 Small Sales		.3			
D7 Small Sales		.1			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1994 FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA	VOLUME	ROAD MILES		PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
	Acres	MMBF	Con	Recon	
D1 Bull Creek II 2C 143 MA 16 S.3-10,15,17-21,28-32 T5S,R13W	500	2.5	2.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D1 Dory Creek 2C 141 MA 16 S.1-12 T5S,R13W S.6 T5S,R12W	100	.5	.5		Douglas-fir Shelterwood and Clearcut Tractor Yarding
D2 Elkhorn II 2E 218,219,225,226 MA 18 S.32-34 T3S,R12W S.2-11 T4S,R12W	700	4.3	9.0		Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D6 Stonewall 4B 605 MA 20 S.19,30 T4S,R3W S.24,25,36 T4S,R4W	191	1.8	5.0	1.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor and Cable Yarding
D1 Small Sales D2 Small Sales D3 Small Sales D7 Small Sales		.8 .5 3.0 .5			

TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR 1995

FOREST Beaverhead

AREA LOCATION (District) (Sale Name) (GDA) (Compartment) (MA) Sec., Township, Range	AREA Acres	VOLUME MMBF	ROAD MILES Con	 Recon	PROBABLE HARVEST METHODS BY FOREST TYPES AND SPECIAL REQUIREMENTS
D1 Upper East Selway 1J 121,125 MA 16,19 S.19-21,29-31 T8S,R14W S.24-26,35,36 T8S,R15W S.6 T9S,R14W S.1-2 T8S,R14W	450	2.5	4.0		Lodgepole - Clearcut Tractor Yarding
D2 Bacon Fork 1B 240,244 MA 20 S.3,4,9-11,13-16,22-24 T2N,R13W	269	2.1	4.0	2.0	Lodgepole - Douglas-fir Clearcut - Shelterwood Tractor Yarding
D2 Calvert Loop 2J 210 MA 16,20 S.7,18,19 T1N,R12W S.11-14,23-26 T1N,R13W	230	1.8	2.0		Lodgepole and Douglas-fir Clearcut and Shelterwood Tractor and Cable Yarding
D3 Whistling Squirrel 1E 322,328 MA 20,26 S.25,26,35,36 T2S,R18W S.17-22,27-34 T2S,R17W S.3-6,9,10 T3S,R17W S.1,2 T3S,R18W	1023	6.0	12.0		Lodgepole - Clearcut Tractor Yarding
D1 Small Sales		1.0			
D2 Small Sales		.5			
D3 Small Sales		1.5			
D6 Small Sales		.3			
D7 Small Sales		.5			

Appendix L

Projected Budget Required to Implement the Forest Plan
(Average Annual, in Thousands of Dollars for the First Decade)

Funding Item	Program Activity	FY 78 1/ Dollars	FY 83 Dollars
00	General Administration	695	1,010
01-02	Fire and Fuels	179	260
03-05	Timber	406	590
06-07	Range	344	500
08	Minerals	158	230
09	Recreation	261	380
10	Wildlife and Fisheries	151	220
11	Soil, Air, and Water	110	160
12	Facility Maintenance	62	90
13-15	Lands and Special Uses	69	100
16	Landline Location	69	100
17	Road Maintenance	199	290
18	Trail Maintenance	65	94
19	Co-op Law Enforcement	7	10
20	Reforestation--Appropriated	55	80
21	TSI--Appropriated	28	40
23	Tree Improvement	14	20
26-28	KV (Trust Fund)	413	600
31	Brush Disposal (Permanent Fund)	69	100
32	Range Improvement	110	160
34	Facility Construction - FAO	117	170
35	Engineering Construction Support	509	740
36	Construction - Capital Investment Roads	378	550
37	Trail Construction/Reconstruction	48	70
38	Timber Purchaser Road Construction	268	390
	Total	4,784	6,954

1/ FY 78 is the base year for costs used in Forest planning.

Appendix M

Procedures for Making Changes in Management Area Designations

GENERAL CONCEPT

All changes proposed for Management Area designations and boundaries will start at the Ranger District level. Documentation of the changes, review of cumulative effects and decisions on when Data Base is changed will be the responsibility of the Planning Staff Officer.

Legislation and budgets may affect prescriptions and targets. Decisions made at the Regional Office level or higher are not covered by this process.

CATEGORIES OF CHANGES AND APPROVAL PROCESS

CATEGORY I. Includes basic data errors in level identifiers affecting the prescription. Level identifiers include roadless status; winter range, elk calving, and other wildlife criteria; productivity as reflected in working groups; land class; and condition classes.

Changes in this category will be documented in project plans or a short, written statement and map. A map and written statement would go to the Planning shop for their records.

Category I changes are approved by the District Ranger. Changes will be reviewed by the Planning Staff Officer. If the Planning Staff Officer determines that the proposed change is more than a simple data correction, or a change that could concern Forest Service personnel or the public, the change moves into Category II or III. The Planning Staff Officer decides when enough changes have occurred to change the Data Base.

CATEGORY II. Includes more complex changes in allocations reflecting changes in desired management direction. These changes include those due to public input and changes due to economic or access constraints which extend into the foreseeable future. This category will also include any Category I changes determined to be minor but potential controversial by either the District Ranger or the Planning Staff Officer through the Forest Supervisor.

The Planning section will document any shifts in general direction needed due to evaluation of public input. District Rangers will recommend changes that are responsive to these shifts in direction. All changes in this category will be documented with Enivironmental Assessments, feasibility studies, or other decision documents.

Changes in this category will be reviewed by the Planning Staff Officer to assure consistency and adequacy of documentation. Needed changes in documentation will be coordinated with the Districts. All changes in this category will be approved by the Forest Supervisor on a case-by-case basis with the Planning shop determining when a sufficient number of changes has occurred to change the Data Base.

CATEGORY III. Includes major changes to be made after the Forest Plan is approved which require formal, public input. This category will include significant changes affecting output. Significant change will generally include any changes controlled at the Supervisor's level, which will create a plus or minus 5% change in Forest outputs. It will also include changes that are controversial enough to warrant formal, public input. All Category III changes will be handled in a similar manner to Category II. The decision on significance of the change will be made during Category II approval phase.

A public involvement plan for these changes will be developed by the Planning section. Public involvement will be documented by the Planning section.

Changes in this category will be approved by the Forest Supervisor.

Appendix N

Schedule of Watershed Restoration Projects

This schedule would accomplish the top level priority projects on the Beaverhead National Forest. Accomplishment of these projects is dependent on funding for watershed rehabilitation. Additional projects could be accomplished if additional dollars became available.

Project	Acres	Location	Fiscal Year
Frying Pan/Bear Ck. Roads	10	Dillon District	86
Lower Fleecer Rds	9	Wise River District	86
Macaroni Ridge	4	Wisdom District	86
Wyethia Control - WF Madison	600	Madison District	86-89
Gilbert Ck. Trail	5	Sheridan District	86
Chinatown Rds	10	Dillon District	87
Quartz Hill Rds	20	Wise River District	87
Hamby Ck. Rds.	20	Wisdom District	87-88
Sureshot/Bungalow	5	Madison District	87
Lazyman/Short Ck. Gullies	20	Sheridan District	87
Deadman Rds.	2	Dillon District	88
Jacobsen Meadows Headcut	1	Wise River District	88
Doolottle/Squaw Rds.	50	Wisdom District	88-91
Table Mt. Rd.	10	Madison District	88
Upper Ruby Cattle Damage	500	Sheridan District	88-95
Lehmi Pass Rd.	5	Dillon District	89
Pintlar Meadows	3	Wise River District	89

Norwegian Gulch Rd	5	Madison District	89
Corral Ck. Rd	5	Sheridan District	89
Deadman Lake	5	Dillon District	90
Trapper Ck. Rds	8	Wise River District	90
Pioneer Ck.	10	Wisdom District	90
Bell Lake Rd.	10	Madison District	90
Geyser Ck. Beaver Dams	10	Sheridan District	90

Appendix O

WITHDRAWAL INVENTORY - BEAVERHEAD NF - 12/31/80

Existing Withdrawals

Serial No.	Name of Site	Township	Range	Acres	Scheduled Date of Review
M011562	Bender L.O. Adm. Site	1 S.	17 W.	10.00	1990
M011562	Bender Adm. Site	1 N.	17 W.	80.00	1990
M011562	Cliff & Wade Lakes Rec. Site	11 S.	1 E.	80.00	1989
M011562	Cliff & Wade Lakes Rec. Site	12 S.	1 E.	1,831.23	1989
M011562	Cliff & Wade Lakes Rec. Site	12 S.	2 E.	157.08	1989
M011562	Elk Creek Adm. Site	3 S.	12 W.	40.00	1987
M011562	Elkhorn Rec. Site	4 S.	12 W.	1,521.24	1987
M011562	Elkhorn Rec. Site	5 S.	12 W.	121.20	1987
M011562	Hammond Adm. Site	5 S.	2 E.	60.00	1989
M011562	O'Dell Adm. Site	3 S.	13 W.	40.00	1987
M011562	Sacajawea Man. Rec. Area	10 S.	15 W.	83.86	1990
M011562	Steel Creek Adm. Site	3 S.	14 W.	260.00	1987
M012788	Cliff Lake Natural Area	12 S.	1 E.	2,271.86	1989
M012788	Vigilante Exp. Range	9 S.	3 W.	199.89	1988
M012788	Vigilante Exp. Range	10 S.	3 W.	627.12	1988
M012923	Sheep Creek	15 S.	10 W.	75.00	1990
M014873	Notch Adm. Site	11 S.	4 W.	40.00	1988
M014873	Rock Creek Adm. Site	3 S.	10 W.	40.00	1987
M014987	Antone Adm. Site	12 S.	5 W.	40.00	1988
M014987	Selway Lookout	8 S.	15 W.	10.00	1990
M014987	Wise River Ranger Station	1 N.	11 W.	20.00	1987
M014987	Wise River Ranger Station	1 S.	11 W.	420.00	1987
M020355	Balanced Rock Rec. Area	4 S.	3 W.	40.00	1988
M020355	Canyon Rec. Area	9 S.	3 W.	15.00	1988
M020355	East Creek Rec. Area	14 S.	9 W.	40.00	1990
M020355	East Creek Rec. Area	15 S.	9 W.	60.00	1990
M020355	Foolhen Adm. Site	1 S.	13 W.	40.00	1987
M020355	Lodgepole Rec. Area	2 S.	12 W.	10.00	1987
M020355	Mill Cr. Rec. Area	4 S.	4 W.	120.00	1988
M020355	Miner Lake Rec. Area	6 S.	16 W.	221.11	1990
M020355	Mussigbrod Rec. Area	1 N.	16 W.	91.22	1990
M020355	Pintlar Lake Rec. Area	1 N.	15 W.	99.05	1990
M020355	Steel Creek Rec. Area	3 S.	14 W.	40.00	1987
M020355	Twin Lakes Rec. Area	5 S.	17 W.	126.25	1990
M020355	Vanhouten Rec. Area	7 S.	15 W.	123.50	1990
M020355	West Fork Camp	11 S.	1 E.	21.16	1989
M020355	Willow Rec. Area	2 S.	12 W.	20.00	1987
M020355	Ennis Horse Pasture	6 S.	1 W.	80.00	1989
M042782	Lightfoot Tract	6 S.	16 W.	127.25	1990
M15830	Kitty Creek Camp	9 S.	15 W.	117.50	1990
M18982	Madison River Streamside Zone	11 S.	1 E.	63.20	1989
M18982	Kirby Meadow Campground	11 S.	1 E.	39.30	1989
M18982	Madison River Campground	11 S.	1 E.	71.66	1989
M18982	Madison River Streamside Zone	11 S.	1 E.	65.95	1989
M20590	Wise River Adm. Site	1 N.	11 W.	40.00	1987
M41181	Bear Creek Adm. Site	8 S.	1 E.	160.00	1989
M41181	Birch Creek Adm. Site	5 S.	10 E.	650.00	1987

Serial No.	Name of Site	Township	Range	Acres	Scheduled Date of Review
M41181	Black Butte Adm. Site	10 S.	2 W.	16.50	1988
M41181	Canyon Creek Adm. Site	2 S.	10 W.	80.00	1987
M41181	Divide Cr. Adm. Site	12 S.	4 W.	160.00	1988
M41181	Hogan Adm. Site	1 S.	18 W.	83.05	1990
M41181	Hogan Adm. Site	1 S.	19 W.	30.95	1990
M41181	Jack Creek Adm. Site	6 S.	2 E.	182.34	1989
M41181	Landon Adm. Site	12 S.	1 W.	80.14	1988
M41181	Lyon Adm. Site	11 S.	1 E.	132.00	1989
M41181	Mill Gulch Adm. Site	5 S.	3 W.	40.00	1988
M41181	Mystic Lake Adm. Site	1 N.	16 W.	40.00	1990
M41181	Potosi Adm. Site	3 S.	2 W.	4.00	1988
M41181	Potosi Adm. Site	3 S.	3 W.	68.87	1988
M41181	Reservoir Lake Adm. Site	8 S.	15 W.	60.00	1990
M41181	Ruby Adm. site	9 S.	3 W.	120.00	1988
M41181	Schultz Adm. Site	1 N.	18 W.	40.00	1990
M41181	Snead Adm. Site	4 S.	2 W.	199.63	1988
M41181	Wall Creek Adm. Site	9 S.	1 W.	165.00	1989
M41270	Bear Creek Ranger Station	8 S.	1 E.	160.00	1989
M41484	Pony Adm. Site	2 S.	3 W.	160.00	1988
M41580	Birch Creek Ranger Station	5 S.	10 W.	40.00	1987
M41592	Steel Creek Adm. Site	3 S.	14 W.	76.00	1987
M41596	Jackson Adm. Site	5 S.	14 W.	129.86	1988
M41597	Horse Prairie Ranger Station	9 S.	14 W.	320.00	1990
*M_____	Ruby Adm. Site	9 S.	3 W.	80.00	1988
*M_____	Ruby Adm. Site	9 S.	3 W.	40.00	1988
*M_____	Jackson Adm. Site	5 S.	14 W.	120.00	1987
*M_____	Wall Creek Adm. Site	9 S.	1 W.	165.00	1989

*Unable to locate copies of Secretary's Orders withdrawing these lands. Not shown on BLM computerized inventory.

Proposed Withdrawals

Serial No.	Name of Site	Township	Range	Acres	Scheduled Date of Review
M166	Aspen Campground	5 S.	10 W.	5.00	1987
M166	Boot Lake Campground	5 S.	11 W.	20.00	1987
M166	Branham Lakes Campground	4 S.	3 W.	20.00	1988
M166	Canyon Creek Campground	2 S.	11 W.	10.00	1987
M166	Crocket Lake Adm. Site	8 S.	2 W.	25.00	1988
M166	Dinner Station Campground	5 S.	11 W.	40.00	1987
M166	Little Joe Camp	3 S.	12 W.	10.00	1987
M166	Lower Seymour Campground	3 N.	13 W.	10.00	1990
M166	May Creek Campground	2 S.	18 W.	60.00	1990
M166	Mono Creek Campground	3 S.	12 W.	10.00	1987
M166	Pear Lake Campground	5 S.	11 W.	10.00	1987
M166	Pintlar Falls Camp	1 N.	15 W.	90.00	1990
M166	Reservoir Lake Campground	8 S.	15 W.	30.00	1990
M166	Upper Sureshot Lake Picnic Area	3 S.	3 W.	50.00	1988
M166	West Fork Adm. Site	12 S.	2 W.	20.00	1988
M166	Willow Creek Campground	3 S.	3 W.	30.00	1988

Serial No.	Name of Site	Township	Range	Acres	Scheduled Date of Review
M18888	Minneopa Lake Rec. Area	5 S.	11 W.	90.00	1987
M25788	Dillon BLM Adm. Site	7 S.	9 W.	0.45	1987
M27963	Cottonwood Creek RNA	10 S.	3 W.	210.00	1988
M924	Canyon Creek Charcoal Kilns	2 S.	10 W.	20.00	1987
M924	Trapper Creek Charcoal Kilns	3 S.	10 W.	21.85	1987

TOTALS

	No. of Serialized Cases	No. of Sites	Acres
Existing Withdrawals	21	65	13,138.97
Proposed Withdrawals	5	21	802.30

Criteria for Review of Mineral Withdrawls

Policy: All mineral withdrawals which are not necessary will be eliminated (revocation). Remaining mineral withdrawals will be reduced in size as much as possible (modification). Mineral withdrawals will not be retained for the sake of convenience or simply to maintain the status quo. The justification statement, which is required for all mineral withdrawals recommended for retention, must address each of the following criteria. To qualify for retention, the entire area encompassed by each mineral withdrawal must meet all criteria, or the withdrawal will be revoked or modified accordingly.

1) The land is still being used for the purpose for which it was withdrawn.

2) Potential mineral exploration, development or production pose a serious risk to the resources/improvements which the withdrawal is meant to protect.

3) There is no other way tp protect the resources/improvements. Possible alternative methods include mitigation measures in operating plans, reclamation bonding, and no surface occupancy stipulations in lease applications.

4) The land has more value for the purpose for which it was withdrawn than it does for potential mineral production.

Note: Because criteria #4 requires a mineral examination and report, all withdrawals should first be reviewed to determine if they meet criteria #1-3.

APPENDIX P

Wildlife Habitat Improvement Projects

(excluding KV projects)
(1986-1990)

Prescribed Type	District	Location	Acres/ Structures	Year	MA
Prescribed Fire C02/610 200 acres/year	Dillon	Maiden Creek	5 acres	86	1
	Wisdom	Battle Mtn/Placer Creek	100 acres	86	25
	Madison	Antelope Basin	95 acres	86	24
	Dillon	Bull Creek	50 acres	87	16
	Wise River	Trapper Creek	60 acres	87	13
	Sheridan	Pole Creek	50 acres	87	24
	Sheridan	Bear Creek	30 acres	87	24
	Sheridan	Cottonwood Creek	10 acres	87	24
	Wise River	Pattengail Creek	50 acres	88	18
	Wisdom	Steel Creek	50 acres	88	14
	Madison	Elk Mountain	100 acres	88	24
	Dillon	Bear Canyon	50 acres	89	22
	Wise River	Adson Creek	10 acres	89	16
	Wisdom	Squaw Creek	50 acres	89	14
	Sheridan	Idaho Creek	90 acres	89	25
	Wise River	Lacy Creek	50 acres	90	24
	Wisdom	Ruby Creek	50 acres	90	14
	Madison	Conklin	100 acres	90	24
Wildlife Openings C02/611 50 acres/year	Wisdom	Steel Creek	10 acres	86	25
	Wisdom	McVey Creek	15 acres	86	25
	Madison	Conklin	25 acres	86	24
	Wise River	Yanks Pasture	25 acres	87	16
	Sheridan	Peacock Creek	25 acres	87	25
	Madison	Elk Mountain	25 acres	88	24
	Wise River	Canyon Creek	25 acres	88	1
	Dillon	Dutchman Mountain	25 acres	89	24
	Wisdom	Steel Creek	15 acres	89	25
	Dillon	W. Medicine Lodge	25 acres	90	1
	Sheridan	Bivins Creek	25 acres	90	24
Fencing C03/624 14 Structures/year	Madison	Conklin	3 Structures	86	24
	Madison	Wall Creek	2 Structures	86	25
	Madison	Antelope Basin	2 Structures	86	24
	Wisdom	Clam Valley - E. Fork Thompson	8 Structures	86	25
	Dillon	L. Sheep Creek	4 Structures	87	24
	Wise River	Storm Park	1 Structure	87	30
	Wise River	Rock Creek	2 Structures	87	30
	Sheridan	Short Creek	2 Structures	87	24
	Sheridan	So. Boundary Gravellies	2 Structures	87	24
	Madison	No. Saddle	1 Structure	87	24
	Madison	Wall Creek	2 Structures	87	25
	Dillon	Deadman Creek	1 Structure	88	24

Prescribed Type	District	Location	Acres/ Structures	Year	
	Wise River	Lincoln Park	6 Structures	88	20
	Sheridan	Gravellies	1 Structure	88	24
	Madison	Bear Creek	3 Structures	88	9
	Dillon	Lost Willow	2 Structures	89	24
	Dillon	Pole Creek	1 Structure	89	16
	Wise River	Toomy Creek	4 Structures	89	24
	Wise River	Browns Creek	2 Structures	89	24
	Madison	Antelope Basin	2 Structures	89	24
	Madison	West Fork Madison	3 Structures	89	24
	Wise River	Upper Trusty	1 Structure	90	24
	Wise River	LaMarche Creek	3 Structures	90	23
	Wise River	Canyon Creek	1 Structure	90	24
	Wisdom	Steel Creek	1 Structure	90	25
	Sheridan	Gravellies	2 Structures	90	24
	Madison	West Fork Madison	4 Structures	90	24
	Madison	Bufiox	2 Structures	90	24
Water Development	Wisdom	Fox Gulch	1 Structure	87	25
C03/622	Madison	Bighorn Mountain	1 Structure	88	1
1 Structure/year	Dillon	Sourdough	1 Structure	89	24
Potholes	Wise River	Pattengail Creek	3 Structures	86	1
C03/620	Wise River	Pattengail Creek	3 Structures	87	1
3 Structures/year	Wisdom	Stewart Meadows	2 Structures	88	8
	Madison	Chero Mountain	1 Structure	88	20
	Wisdom	Stewart Meadows	3 Structures	89	8
	Wise River	Pintler Creek	2 Structures	90	18
	Madison	W. Fork Madison	1 Structure	90	24
Nest Structures	Wise River	Wise River	2 Structures	86	18
C03/621	Madison	Cliff Lake	1 Structure	86	6
3 Structures/year	Wise River	Wise River	1 Structure	87	18
	Wisdom	Mussingbrod Lake	1 Structure	87	1
	Madison	Elk Lake	1 Structure	87	1
	Wisdom	Mystic Lake	1 Structure	88	9
	Sheridan	Coal Creek	1 Structure	88	24
	Madison	Cliff Lake	1 Structure	88	6
	Wisdom	Twin Lake	1 Structure	89	1
	Sheridan	Burnt Creek	1 Structure	89	24
	Madison	Smith Lake	1 Structure	89	1
	Wisdom	Miner Lake	1 Structure	90	7
	Sheridan	Cottonwood Creek	1 Structure	90	24
	Madison	Wade Lake	1 Structure	90	1

APPENDIX Q

Criteria and Schedule for Range Allotment Management Plan Completion and Implementation

All livestock grazing allotments on the Beaverhead National Forest are scheduled to be managed under an improved management system within 5 years following Land Management Plan implementation. Improved management will involve some form of rest or deferrment, except for a few instances where use of National Forest forage is incidental to use on adjoining private land covered by on-off permits. Specific resource issues, concerns, and opportunities will be addressed in an individual Allotment Management Plan (AMP) that will be developed for each active grazing allotment.

Of the 179 active grazing allotments on the Forest, 10 are managed by the BLM in conjunction with more extensive BLM allotment areas, 28 lack approved AMP's, 44 have AMP's that are over 10 years old, need updating or are not being followed, and 98 have current AMP's that need updating every 10 years.

The following 5-year projection is made for AMP completion or revision. This projection is subject to revision based on identified need, opportunity, and funding/personnel allocations.

GRAZING ALLOTMENT NAME	DISTRICT	STATUS	AMP PREP (FY)	REMARKS
COX RANCH	WISDOM	NO PLAN	87	RIPARIAN/STOCKING PROBLEM
DIVIDE CREEK	DILLON	NO PLAN	87	
BEAR CANYON S&G	DILLON	NO PLAN	87	DISTRIBUTION/STOCKING
PINTLER	WISE RIVER	NO PLAN	87	STOCKING/RIPARIAN PROBLEM
CABIN CREEK	DILLON	NO PLAN	87	
BEAR WALLOW	DILLON	REVISION	87	RIPARIAN PROBLEMS
UPPER RUBY	SHERIDAN	REVISION	87	RIPARIAN/STOCKING PROBLEM
WILLOW CR	MADISON	REVISION	87	PLAN OUTDATED
SHEEP MOUNTAIN	WISE RIVER	REVISION	87	
MAIDEN CR	DILLON	REVISION	87	STOCKING/RIPARIAN PROBLEM
POLE CREEK	DILLON	REVISION	87	RIPARIAN PROBLEMS
POISON BASIN S&G	SHERIDAN	REVISION	87	PLAN OUTDATED
MONUMENT	WISDOM	REVISION	87	RIPARIAN/SYSTEM PROBLEM
CASCADE LOBO S&G	MADISON	REVISION	87	PLAN OUTDATED
INDIAN CR.	MADISON	REVISION	87	OUTDATED
RATTLESNAKE	DILLON	REVISION	87	MUNICIPAL WATERSHED
WALL CR.	MADISON	REVISION	87	INTERIM PLAN WORKING
POLE CR.	SHERIDAN	REVISION	87	OUTDATED
BURNT CREEK S&G	SHERIDAN	REVISION	87	OUTDATED
COAL CREEK S&G	SHERIDAN	REVISION	87	OUTDATED
SHEARING PEN	DILLON	NO PLAN	88	WILDLIFE CONFLICT
STRAWBERRY RIDGE	MADISON	NO PLAN	88	BLM ADMIN.
BUFFALO	DILLON	NO PLAN	88	RIPARIAN/STOCKING PROBLEM
TWIN LAKES	WISDOM	NO PLAN	88	RIPARIAN PROBLEMS
MUSSIGBROD	WISDOM	NO PLAN	88	RIPARIAN/STOCKING PROBLEM
GRAPHITE MOUNTAIN	DILLON	NO PLAN	88	WATERSHED CONCERNS
MCKENZIE	DILLON	NO PLAN	88	CONVERT CLOSED S&G TO COWS

MCKNIGHT	DILLON	NO PLAN	88	CONVERT CLOSED S&G TO COWS
SOURDOUGH WINTER	DILLON	NO PLAN	88	CONVERT CLOSED S&G TO COWS
LITTLE WATER DRIVE.	DILLON	NO PLAN	88	CLOSE OR COMBINE
BIG HOLE DIVIDE	DILLON	NO PLAN	88	
LOST HORSE	WISE RIVER	NO PLAN	88	RIPARIAN/STOCKING PROBLEM
CREAM CREEK S&G	SHERIDAN	REVISION	88	SPACE/SOILS PROBLEMS
WOLVERINE S&G	MADISON	REVISION	88	MAY COMBINE
SOURDOUGH C&H	DILLON	REVISION	88	WATER SHORTAGE
LYON MTN S&G	MADISON	REVISION	88	MAY COMBINE
NOBLE-INDIAN	SHERIDAN	REVISION	88	OUTDATED
SHEDHORN	MADISON	REVISION	88	OUTDATED
WEST FORK	MADISON	REVISION	88	OUTDATED
JERKED PRAIRIE	WISE RIVER	REVISION	88	RIPARIAN/SYSTEM PROBLEM
LIMA PEAKS	DILLON	REVISION	88	PERMITTEE REQUEST
BLACK BUTTE BENCH S&G	SHERIDAN	REVISION	88	OUTDATED
GRANITE CREEK	SHERIDAN	REVISION	88	OUTDATED
ROCK-MOOSE	WISDOM	NO PLAN	89	RIPARIAN/STOCKING PROBLEM
LAKE CREEK	DILLON	NO PLAN	89	
SNYDER CREEK	DILLON	NO PLAN	89	RIPARIAN PROBLEMS
MUDD CREEK	WISE RIVER	NO PLAN	89	
DORY CREEK	DILLON	NO PLAN	89	
FARLEY DYER	DILLON	NO PLAN	89	RIPARIAN/DISTRIBUTION
STANDARD CR.	MADISON	NO PLAN	89	
CLOVER MEADOWS	SHERIDAN	REVISION	89	OUTDATED
PIONEER	WISDOM	REVISION	89	STOCKING/RIPARIAN NEED
SOUTH INDIAN	MADISON	REVISION	89	OUTDATED
FOSSIL-HELLROARING	MADISON	REVISION	89	OUTDATED
CONKLIN	MADISON	REVISION	89	OUTDATED
GRASSHOPPER	DILLON	REVISION	89	RIPARIAN PROBLEMS
WEST CREEK S&G	SHERIDAN	REVISION	89	STOCKING/SPACE PROBLEMS
FOOLHEN	WISE RIVER	REVISION	89	OUTDATED
WARM SPRINGS	SHERIDAN	REVISION	89	OUTDATED
ANTELOPE BASIN	MADISON	REVISION	89	OUTDATED
CLOVER CREEK S&G	SHERIDAN	REVISION	89	OUTDATED
NORTH END	DILLON	NO PLAN	90	BLM TO DO
SEC. 29	DILLON	NO PLAN	90	
JOHNSON CR.	WISDOM	REVISION	90	
HORSE PRAIRIE	DILLON	REVISION	90	STOCKING PROBLEM
ELK LAKE S&G	MADISON	REVISION	90	
NORTH SADDLE	MADISON	REVISION	90	
MEADOW CREEK	WISE RIVER	REVISION	90	
ANDERSON MEADOWS	WISE RIVER	REVISION	90	
NORTH MEADOW	MADISON	REVISION	90	
HOWELL CR.	WISDOM	REVISION	90	
S. MEADOW	MADISON	REVISION	90	
CROCKETT LAKE	MADISON	REVISION	90	
MAVERICK BASIN	SHERIDAN	REVISION	90	
BIVENS CR.	SHERIDAN	REVISION	90	
LONG CR.	SHERIDAN	REVISION	90	
GARDEN PATCH	DILLON	REVISION	90	
SNOWCREST	SHERIDAN	REVISION	90	
BLOODY DICK	DILLON	REVISION	90	
NORTH BLACK CANYON	DILLON	REVISION	90	
AYERS CANYON	DILLON	REVISION	90	

KATE CREEK	DILLON	REVISION	90	
DEER CANYON	DILLON	REVISION	90	
ELLIS PEAK	DILLON	NO PLAN	91	BLM TO DO
PASS CREEK	DILLON	NO PLAN	91	BLM TO DO
BADGER PASS	DILLON	REVISION	91	
WISCONSIN-NUGGET	SHERIDAN	REVISION	91	
TRAIL CREEK	WISDOM	REVISION	91	
COPP-JACKSON	WISE RIVER	REVISION	91	
TASH	DILLON	REVISION	91	
MIDDLE FORK	DILLON	REVISION	91	
HENDERSON GULCH	DILLON	REVISION	91	
DUTCHMAN MOUNTAIN	DILLON	REVISION	91	
DRY CANYON	DILLON	REVISION	91	
CANYON CREEK	WISE RIVER	REVISION	91	
NORTH STEEL	WISDOM	REVISION	91	
DOOLITTLE-ELK POINT	WISDOM	REVISION	91	
HIDDEN LAKE BENCH	MADISON	REVISION	91	
RED ROCK	MADISON	REVISION	91	
PAPOOSE	MADISON	REVISION	91	
S.W. CORNER	SHERIDAN	REVISION	91	
CLIFF LAKE BENCH	MADISON	REVISION	91	
CHERRY CREEK	MADISON	REVISION	91	
COTTONWOOD S&G	SHERIDAN	REVISION	91	

APPENDIX R

Criteria and Schedule for Range Structural and Non-Structural Range Improvements

Numerous projects are necessary to meet objectives on livestock grazing allotments, as specific Allotment Management Plans (AMP'S) are developed for each grazing allotment. Specific need, issues, concerns and opportunities for individual improvements are addressed in the AMP's. Although all projects will be closely coordinated with other resource values, specific priority will be directed at wildlife coordination for sagebrush/Douglas-fir encroachment burning projects since wildlife values frequently benefit from such treatment. Some projects, such as burns, may not occur as shown because of the need to coordinate with a rotation system or similar problem.

Investment in structural improvements will normally include approximately a 50-50% split in cost between the grazing permittee and the Forest Service. This split is normally accomplished by the Forest Service purchasing supplies, and the grazing permittee furnishing labor and equipment. Resource limitations (funding and labor) will frequently result in schedule revision from what is shown below. For instance, the 3 miles of fence and 2 water developments shown for the West Fork Allotment may well exceed the permittees' resources for FY88. They may actually construct part of the projects in FY88 and complete them the following year.

The following 5-year projection is made for range structural and non-structural improvement projects. This projection is subject to revision based on identified need, opportunity, and funding/personnel allocations.

GRAZING ALLOTMENT	DISTRICT	IMPROVEMENT DESCRIPTION	SIZE	FY
ANDRUS	DILLON	FENCE CONST/RECONST	1 MILE	87
BADGER PASS	DILLON	RESERVOIR RECONST.	2 EACH	87
BIRCH CREEK	DILLON	SAGEBRUSH/DF BURN	150 ACRE	87
BLOODY DICK	DILLON	FENCE REMOVAL	.5 MILE	87
BULL CREEK	DILLON	NELLIE'S SAGE BURN	200 ACRE	87
CONTINENTAL	DILLON	SPRING REDEVELOPMENT	1 EACH	87
COYOTE CREEK	DILLON	COYOTE/BROWNS FENCE EXT.	.5 MILE	87
CRYSTAL CREEK	DILLON	S. BDY FENCE EXTENTION	.5 MILE	87
DUTCHMAN MOUNTAIN	DILLON	PIPELINE RECONST.	7 MILE	87
EAST SELWAY	DILLON	FENCE CONST.	1 MILE	87
HENDERSON GULCH	DILLON	SPRING DEVELOPMENT	2 EACH	87
		FENCE REMOVAL/RECONST.	3.5 MILE	87
HORSE PRAIRIE	DILLON	FENCE RECONST.	1 MILE	87
LOST WILLOW	DILLON	PIPELINE CONSTRUCTION	3.5 MILE	87
MAIDEN CREEK	DILLON	U. JEFF DAVIS BURN	150 ACRE	87
		BDY FENCE RELOCATION	1 MILE	87
MIDDLE FORK	DILLON	TRAIL RELOCATION	.5 MILE	87
PINE CREEK	DILLON	BANNOCK SPG. DEV.	1 EACH	87
RATTLESNAKE	DILLON	SPRING REDEVELOPMENT	1 EACH	87
SAWMILL	DILLON	FENCE RECONSTRUCTION	1 MILE	87
SHINEBERGER	DILLON	FENCE RECONSTRUCTION	2 MILE	87
SIMPSON CREEK	DILLON	PIPELINE	4.2 MILE	87
W.MEDICINE LODGE	DILLON	DIVISION FENCE CONST.	1.5 MILE	87

WEST SELWAY	DILLON	FENCE CONSTRUCTION	1.5	MILE	87
WHITE PINE	DILLON	CHUTE CANYON FENCE EX.	.5	MILE	87
TRAPPER CREEK	WISE RIVER	TRAPPER DOUNDARY FENCE	.5	MILE	87
		CATTLE GUARD	1	EACH	87
BROWNS CHERRY	WISE RIVER	HOMESTEAD SPRING RECONST	1	EACH	87
		BOUNDARY FENCE RECONST	.25	MILE	87
		BEALS MTN WATER GAP	.25	MILE	87
CALVERT HILL	WISE RIVER	BRYANT CR FENCE	.25	MILE	87
		CATTLEGUARD	1	EACH	87
LINCOLN PARK	WISE RIVER	DAVIS MINE WATER DEV.	1	EACH	87
SEYMOUR	WISE RIVER	PACK TRAIL FENCE	.25	MILE	87
		POWERLINE FENCE	.5	MILE	87
PINTLER CREEK	WISE RIVER	PINTLER SAGE/TREE BURN	500	ACRES	87
JERKED PRAIRIE	WISE RIVER	LARKSPUR CONTROL	120	ACRES	87
CALVERT HILL	WISE RIVER	LARKSPUR CONTROL	100	ACRES	87
JERRY CREEK	WISE RIVER	LARKSPUR CONTRON	200	ACRES	87
		GRASSY GRANULATED FENCE	.5	MILE	87
TOOMEY CREEK	WISE RIVER	SAWLOG SPRING RECONST	1	EACH	87
SHEEP MOUNTAIN	WISE RIVER	SHEEP CREEK BURN	100	ACRES	87
RUBY CREEK	WISDOM	DIVISION FENCE CONST.	4	MILES	87
		CATTLEGUARDS	2	EACH	87
		LARKSPUR CONTROL	100	ACRES	87
CLAM VALLEY	WISDOM	FENCE MODIFICATION	3	MILES	87
		FENCE CONST/RECONST	3	MILES	87
		SAGEBRUSH BURN	450	ACRES	87
COX RANCH	WISDOM	FENCE CONST/RECONST	3	MILES	87
		BDY FENCE RECONST	2	MILES	87
		WATER DEV CONST/RECONST	1	EACH	87
		LARKSPUR CONTROL	100	ACRES	87
TWIN LAKES	WISDOM	ALLOT. BDY FENCE-KV	.5	MILE	87
DRY CREEK	WISDOM	ALLOT. BDY FENCE-KV	.5	MILE	87
DOOLITTLE-ELK POINT	WISDOM	DIVISION FENCE-KV	1	MILE	87
NORTH STEEL	WISDOM	ALLOT. BDY FENCE-KV	1	MILE	87
TRAIL CREEK	WISDOM	ALLOT. BDY FENCE-KV	.5	MILE	87
TIE CREEK	WISDOM	ALLOT. BDY FENCE-KV	.5	MILE	87
GREENHORN	SHERIDAN	BOUNDARY FENCE RECONST	1.5	MILES	87
		SAGEBRUSH/DF BURN	100	ACRES	87
POLE CREEK	SHERIDAN	WATER DEV CONST/RECONST	2	EACH	87
		SAGEBRUSH/DF BURN	100	ACRES	87
NOBLE-INDIAN	SHERIDAN	BOUNDARY FENCE RECONST	1	MILE	87
EUREKA BASIN	SHERIDAN	WYETHIA CONTROL	200	ACRES	87
		WATER DEV CONST/RECONST	1	EACH	87
COAL CR. S&G	SHERIDAN	WYETHIA CONTROL	80	ACRES	87
UPPER RUBY	SHERIDAN	WATER DEV CONST/RECONST	2	EACH	87
		SAGEBRUSH BURN	100	ACRES	87
BURNT CR. S&G	SHERIDAN	WYETHIA CONTROL	30	ACRES	87
CLOVER MEADOWS	SHERIDAN	FENCE RECONSTRUCTION	1	MILE	87
MT. CAREY	SHERIDAN	FENCE CONST/RECONST	1	MILE	87
		WATER DEV CONST/RECONST	1	EACH	87
BIVENS CR.	SHERIDAN	WATER DEV CONST/RECONST	1	EACH	87
SNOWCREST	SHERIDAN	WATER DEV CONST/RECONST	1	EACH	87
MILL CREEK	SHERIDAN	SAGEBRUSH/DF BURN	80	ACRES	87
		FENCE CONST/RECONST	2	MILES	87
WEST FORK	MADISON	WYETHIA CONTROL	50	ACRES	87

		FENCE CONST/RECONST	3 MILES	87
		WATER DEV. CONST/RECONST	2 EACH	87
CONKLIN	MADISON	FENCE CONST/RECONST	3 MILES	87
		WATER DEV. CONST/RECONST	2 EACH	87
		LARKSPUR CONTROL	50 ACRES	87
ANTELOPE BASIN	MADISON	SAGEBRUSH/TREE BURN	200 ACRES	87
		FENCE CONST/RECONST	3 MILES	87
		WATER DEV CONST/RECONST	2 EACH	87
		LARKSPUR CONTROL	25 ACRES	87
ELK LAKE S&G	MADISON	FENCE CONST/RECONST	2 MILES	87
		WATER DEV CONST/RECONST	2 EACH	87
NORTH SADDLE	MADISON	WYETHIA CONTROL	100 ACRES	87
		FENCE CONST/RECONST	1 MILE	87
		WATER DEV CONST/RECONST	2 EACH	87
SOUTH MEADOW	MADISON	FENCE CONST/RECONST	2 MILES	87
		WATER DEV CONST/RECONST	2 EACH	87
ANDRUS	DILLON	FENCE CONST/RECONST	.5 MILE	88
BEAR CANYON S&G	DILLON	WATER DEVELOPMENTS	1 EACH	88
BEAR CREEK	DILLON	FENCE CONST/RECONST	1.5 MILES	88
BIG HOLE DIVIDE	DILLON	LARKSPUR CONTORL	25 ACRES	88
BIRCH CREEK	DILLON	PIPELINE W/3 TROUGHS	1.5 MILES	88
BROWNS CANYON	DILLON	FENCE CONST/RECONST	1 MILE	88
DEADMAN LAKE	DILLON	LITTLE DEADMAN BURN	200 ACRES	88
		FENCE CONST/RECONST	2 MILES	88
HARKNESS	DILLON	WATER DEV CONST/RECONST	1 EACH	88
MAIDEN CREEK	DILLON	WATER DEV CONST/RECONST	1 EACH	88
MIDDLE FORK	DILLON	FENCE CONST/RECONST	2 MILES	88
POLE CREEK	DILLON	FENCE CONST/RECONST	2 MILES	88
		SAGE CORNER SPRING	1 EACH	88
RATTLESNAKE	DILLON	FENCE CONST/RECONST	1.5 MILES	88
SOURDOUGH C&H	DILLON	FENCE CONST/RECONST	.25 MILE	88
S.BLACK CANYON	DILLON	FENCE CONST/RECONST	1.5 MILES	88
W.MEDICINE LODGE	DILLON	WATER DEV CONST/RECONST	1 EACH	88
SEYMOUR	WISE RIVER	SUNDANCE DRIFT FENCE	.25 MILE	88
PINTLER	WISE RIVER	UNIT DIVISION FENCES	2 MILES	88
TRAPPER CREEK	WISE RIVER	RESERVOIR RECONSTRUCT	3 EACH	88
		SUCKER GULCH WATER DEV	1 EACH	88
TOOMEY CREEK	WISE RIVER	SAWLOG SPG. #3 RECONST	1 EACH	88
LINCOLN PARK	WISE RIVER	MOOSE CR BDY FENCE	1 MILE	88
		DAVID SPG RECONST.	1 EACH	88
BROWN'S CHERRY	WISE RIVER	U. BROWNS PIPE/TROUGH	.75 MILE	88
JERKED PRAIRIE	WISE RIVER	LARKSPUR CONTROL	120 ACRES	88
		PATTENGAIL DAM FENCE	.5 MILE	88
CALVERT HILL	WISE RIVER	LARKSPUR CONTROL	100 ACRES	88
		TEDDY CREEK FENCE	1 MILE	88
JERRY CREEK	WISE RIVER	LARKSPUR CONTROL	200 ACRES	88
		JOHNSON SAGE BURN	100 ACRES	88
SHEEP MOUNTAIN	WISE RIVER	BUTLER CR. WATER DEV	1 EACH	88
MONUMENT	WISDOM	FENCE CONST/RECONST	3.5 MILES	88
		CATTLEGUARDS	2 EACH	88
		LIVESTOCK TRAIL CONST	1 MILE	88
COX RANCH	WISDOM	LARKSPUR CONTROL	100 ACRES	88
		LARKSPUR FOLLOWUP (87)	100 ACRES	88
RUBY CREEK	WISDOM	LARKSPUR FOLLOWUP	200 ACRES	88

TRAIL CREEK	WISDOM	DIVISION FENCE CONST-KV	2	MILES	88
PAPOOSE	WISDOM	BOUNDARY FENCE CONST-KV	.5	MILE	88
DOOLITTLE-ELK POINT	WISDOM	BOUNDARY FENCE CONST-KV	.5	MILE	88
POLE CREEK	SHERIDAN	FENCE CONST/RECONST	3	MILES	88
		WATER DEV CONST/RECONST	1	EACH	88
		SAGEBRUSH BURN	100	ACRES	88
EUREKA BASIN	SHERIDAN	WATER DEV CONST/RECONST	1	EACH	88
UPPER RUBY	SHERIDAN	FENCE CONST/RECONST	2	MILES	88
		WATER DEV CONST/RECONST	2	EACH	88
		SAGEBRUSH BURN	150	ACRES	88
BURNT CR. S&G	SHERIDAN	SAGEBRUSH BURN	70	ACRES	88
MT. CAREY	SHERIDAN	WATER DEV CONST/RECONST	1	EACH	88
		SAGEBRUSH BURN	80	ACRES	88
WISCONSIN-NUGGET	SHERIDAN	FENCE CONST/RECONST	1	MILE	88
WILLOW CR	MADISON	FENCE RECONST/RELOCATION	4	MILES	88
		WATER DEV. CONST/RECONST	3	EACH	88
		SAGEBRUSH/TREE BURN	100	ACRES	88
CASCADE LOBO S&G	MADISON	WYETHIA CONTROL	80	ACRES	88
INDIAN CR.	MADISON	FENCE CONST/RECONST.	3	MILES	88
		TRAIL RECONST.	2	MILES	88
		BRIDGE REPLACEMENT	1	EACH	88
WALL CR.	MADISON	FENCE CONST/RECONST.	5	MILES	88
		SAGEBRUSH/TREE BURN	100	ACRES	88
		WATER DEV. CONST/RECONST.	4	EACH	88
WEST FORK	MADISON	WYETHIA CONTROL	25	ACRES	88
CONKLIN	MADISON	LARKSPUR CONTROL	50	ACRES	88
ANTELOPE BASIN	MADISON	LARKSPUR CONTROL	25	ACRES	88
NORTH SADDLE	MADISON	WYETHIA CONTROL	50	ACRES	88
ANDRUS	DILLON	WATER DEV CONST/RECONST	1	EACH	89
BADGER PASS	DILLON	FENCE CONST/RECONST	.5	MILE	89
BEAR CANYON S&G	DILLON	TONSILITIS/BEAR BURN	200	ACRES	89
BEAR CREEK	DILLON	FENCE CONST/RECONST	1	MILE	89
BIG HOLE DIVIDE	DILLON	FOX/COW CABIN DIV FENCE	1	MILE	89
BIRCH CREEK	DILLON	FENCE CONST/RECONST	1	MILE	89
BUFFALO CREEK	DILLON	FENCE CONST/RECONST	2	MILES	89
DUTCHMAN MOUNTAIN	DILLON	SAGEBRUSH/DF BURN	200	ACRES	89
GRAPHITE	DILLON	MCBRIDE SPRING	1	EACH	89
		FENCE CONST/RECONST	2	MILES	89
HARKNESS	DILLON	WATER DEV CONST/RECONST	1	EACH	89
LOST WILLOW	DILLON	FENCE CONST/RECONST	1.2	MILES	89
		SUGARLOAF SAGE BURN	250	ACRES	89
MIDDLE FORK	DILLON	LARKSPUR CONTROL	20	ACRES	89
POLE CREEK	DILLON	WATER DEV CONST/RECONST	1	EACH	89
S.BLACK CANYON	DILLON	WATER DEV CONST/RECONST	1	EACH	89
WHITE PINE	DILLON	WATER DEV CONST/RECONST	2	EACH	89
BROWNS CHERRY	WISE RIVER	L.CHERRY BLM WATER GAP	.25	MILES	89
FOOLHEN	WISE RIVER	ALDER PARK FENCE	.5	MILES	89
LINCOLN PARK	WISE RIVER	LINCOLN PARK SPRING REDEV	1	EACH	89
SEYMOUR	WISE RIVER	F.F. LAMARCHE FENCE	.25	MILE	89
JERKED PRAIRIE	WISE RIVER	LARKSPUR CONTROL	120	ACRES	89
CALVERT HILL	WISE RIVER	LARKSPUR CONTROL	100	ACRES	89
MUDD CREEK	WISE RIVER	LARKSPUR CONTROL	100	ACRES	89
		CAMP HOLLOW SAGE BURN	100	ACRES	89
LOST HORSE	WISE RIVER	UNIT DIVISION FENCES	1	MILES	89

VIPOND PARK	WISE RIVER	RESERVOIR RECONST.	2 EACH	89
SHEEP MOUNTAIN	WISE RIVER	SPRING CR. WATER DEV.	1 EACH	89
COPP-JACKSON	WISE RIVER	DRY GULCH SAGE BURN	100 ACRES	89
TWIN LAKES	WISDOM	FENCE CONST/RECONST	5 MILES	89
		CATTLEGUARDS	2 EACH	89
		WATER DEV CONST/RECONST	3 EACH	89
COX RANCH	WISDOM	LARKSPUR FOLLOWUP	200 ACRES	89
RUBY CREEK	WISDOM	LARKSPUR FOLLOWUP	200 ACRES	89
		FENCE CONST.-KV	1.5 MILES	89
TRAIL CREEK	WISDOM	FENCE CONST.-KV	1.5 MILES	89
JOHNSON CREEK	WISDOM	FENCE CONST.-KV	.75 MILE	89
MUSSIGBROD	WISDOM	FENCE CONST.-KV	.75 MILE	89
HOWELL CREEK	WISDOM	FENCE CONST.-KV	.5 MILE	89
UPPER RUBY	SHERIDAN	FENCE CONST/RECONST	3 MILES	89
		SAGEBRUSH BURN	150 ACRES	89
GRANITE CREEK	SHERIDAN	FENCE CONST/RECONST	1 MILE	89
CLOVER MEADOWS	SHERIDAN	FENCE CONST/RECONST	2 MILES	89
LONG CREEK	SHERIDAN	FENCE CONST/RECONST	2 MILES	89
SNOWCREST	SHERIDAN	WATER DEV CONST/RECONST	1 EACH	89
CASCADE LOBO S&G	MADISON	WYETHIA CONTROL	40 ACRES	89
STRAWBERRY RIDGE	MADISON	BOUNDARY & DIV. FENCES	1 MILE	89
		WATER DEVELOPMENT	1 EACH	89
WOLVERINE S&G	MADISON	SAGEBRUSH/TREE BURN	100 ACRES	89
		WYETHIA CONTROL	80 ACRES	89
LYON MTN S&G	MADISON	SAGEBRUSH/TREE BURN	100 ACRES	89
		WYETHIA CONTROL	50 ACRES	89
SHEDHORN	MADISON	FENCE CONST/RECONST.	3 MILES	89
		TRAIL CONST/RECONST.	3 MILES	89
WEST FORK	MADISON	FENCE CONST/RECONST.	4 MILES	89
		WATER DEV. CONST/RECONST.	4 EACH	89
		WYETHIA CONTROL	80 ACRES	89
		SAGEBRUSH/TREE BURN	80 ACRES	89
CONKLIN	MADISON	LARKSPUR CONTROL	30 ACRES	89
ANDRUS	DILLON	FENCE CONST/RECONST	2 MILES	90
AYERS CANYON	DILLON	WATER DEV CONST/RECONST	1 EACH	90
BIRCH CREEK	DILLON	FENCE CONST/RECONST	1 MILE	90
BUFFALO	DILLON	RESERVOIR RECONST	5 EACH	90
FARLEY-DYER	DILLON	WATER DEV CONST/RECONST	1 EACH	90
		FENCE CONST/RECONST	2 MILES	90
GARDEN PATCH	DILLON	FENCE CONST/RECONST	1 MILE	90
GRAPHITE	DILLON	ASPEN SPRING DEVELOPMENT	1 EACH	90
GRASSHOPPER	DILLON	FENCE CONST/RECONST	1.5 MILES	90
HARKNESS	DILLON	WATER DEV CONST/RECONST	1 EACH	90
KATE CREEK	DILLON	FLAT TIRE SPRING DEV	1 EACH	90
LOST WILLOW	DILLON	WATER DEV CONST/RECONST	1 EACH	90
MEADOW CREEK	DILLON	WILLOW PATCH SPRING DEV	1 EACH	90
SAWMILL	DILLON	L. SAWMILL SPRING REDEV	1 EACH	90
SHINEBERGER	DILLON	LARKSPUR CONTROL	80 ACRES	90
W.MEDICINE LODGE	DILLON	SAGEBRUSH/DF BURN	200 ACRES	90
SEYMOUR	WISE RIVER	UPPER SULLIVAN SPRING	1 EACH	90
		FENCE CONST/RECONST	1 MILE	90
JERKED PRAIRIE	WISE RIVER	LARKSPUR CONTROL	120 ACRES	90
CALVERT HILL	WISE RIVER	LARKSPUR CONTROL	100 ACRES	90
MUDD CREEK	WISE RIVER	LARKSPUR CONTROL	100 ACRES	90

		DIVISION FENCE CONST	3	MILES	90
		CATTLEGUARD	1	EACH	90
MEADOW CREEK	WISE RIVER	HARRIET LOU SAGE BURN	100	ACRES	90
ANDERSON MEADOWS	WISE RIVER	RABBIA CR FENCE RECONST	.5	MILES	90
		STEWART MDWS TRAIL RECON	.5	MILES	90
SHEEP MOUNTAIN	WISE RIVER	BUTLER/ADSON FENCE	.5	MILES	90
ROCK MOOSE	WISDOM	WATER DEV CONST/RECONST	3	EACH	90
		FENCE CONST/RECONST	3.5	MILES	90
		CATTLEGUARDS	2	EACH	90
PIONEER	WISDOM	FENCE CONST/RECONST	2	MILES	90
		LIVESTOCK TRAIL CONST	2	MILES	90
		WATER DEV CONST/RECONST	1	EACH	90
COX RANCH	WISDOM	LARKSPUR FOLLOWUP	150	ACRES	90
RUBY CREEK	WISDOM	LARKSPUR FOLLOWUP	100	ACRES	90
		FENCE CONST/RECONST	2	MILES	90
JOHNSON CREEK	WISDOM	BDY FENCE CONST-KV	.5	MILE	90
TIE CREEK	WISDOM	BDY FENCE CONST-KV	.5	MILE	90
UPPER RUBY	SHERIDAN	FENCE CONST/RECONST	2	MILES	90
		SAGEBRUSH BURN	150	ACRES	90
CLOVER CR. S&G	SHERIDAN	SAGEBRUSH BURN	80	ACRES	90
WARM SPRINGS	SHERIDAN	FENCE CONST/RECONST	3	MILES	90
		SAGEBRUSH/TREE BURN	100	ACRES	90
		WATER DEV CONST/RECONST	2	EACH	90
GRANITE CREEK	SHERIDAN	FENCE CONST/RECONST	2	MILE	90
		WATER DEV CONST/RECONST	1	EACH	90
COAL CR. S&G	SHERIDAN	WYETHIA CONTROL	40	ACRES	90
		SAGEBRUSH/TREE BURN	70	ACRES	90
MAVERICK BASIN	SHERIDAN	FENCE CONST/RECONST	1	MILE	90
MT. CAREY	SHERIDAN	SAGEBRUSH BURN	40	ACRES	90
BIVENS CREEK	SHERIDAN	FENCE CONST/RECONST	2	MILES	90
		SAGEBRUSH/DF BURN	100	ACRES	90
WEST FORK	MADISON	WYETHIA CONTROL	40	ACRES	90
STANDARD CR.	MADISON	UNIT DIVISION FENCE	4	MILES	90
		ALLOT BOUNDARY FENCE	2	MILES	90
		CATTLE GUARDS	4	EACH	90
SOUTH INDIAN	MADISON	FENCE CONST/RECONST	2	MILES	90
		SAGEBRUSH/TREE BURN	100	ACRES	90
FOSSIL-HELLROARING	MADISON	WYETHIA CONTROL	150	ACRES	90
		SAGEBRUSH/TREE BURN	80	ACRES	90
CONKLIN	MADISON	FENCE CONST/RECONST.	4	MILES	90
		WATER DEV. CONST/RECONST.	5	EACH	90
		LARKSPUR CONTROL	30	ACRES	90
ANTELOPE BASIN	MADISON	FENCE CONST/RECONST.	4	MILES	90
		LARKSPUR CONTROL	15	ACRES	90
		SAGEBRUSH/TREE BURN	60	ACRES	90
		WATER DEV. CONST/RECONST.	3	EACH	90
AYERS CANYON	DILLON	FENCE CONST/RECONST	1	MILE	91
BLOODY DICK	DILLON	WATER DEV CONST/RECONST	1	EACH	91
BIRCH CREEK	DILLON	WATER DEV CONST/RECONST	1	EACH	91
CONTINENTAL	DILLON	FENCE CONST/RECONST	1	MILE	91
DORY CREEK	DILLON	SKI HILL FENCE	1.5	MILES	91
EAST SELWAY	DILLON	CL PASTURE BURN	200	ACRES	91
FARLEY-DYER	DILLON	WATER DEV CONST/RECONST	1	EACH	91
GARDEN PATCH	DILLON	FENCE CONST/RECONST	1	MILE	91

KATE CREEK	DILLON	WATER DEV CONST/RECONST	1 EACH	91
		FENCE CONST/RECONST	1 MILE	91
LOST WILLOW	DILLON	WATER DEV CONST/RECONST	1 EACH	91
NORTH BLACK CANYON	DILLON	FENCE CONST/RECONST	3 MILES	91
		WATER DEV CONST/RECONST	1 EACH	91
RATTLESNAKE	DILLON	WATER DEV CONST/RECONST	1 EACH	91
SECTION 29	DILLON	FENCE CONST/RECONST	1 MILE	91
MUDD CR.	WISE RIVER	LARKSPUR CONTROL	100 ACRES	91
JERKED PRAIRIE	WISE RIVER	LARKSPUR CONTROL	50 ACRES	91
SHEEP MOUNTAIN	WISE RIVER	BUTLER CR. TRAIL CONST	1 MILE	91
		FENCE CONST/RECONST	1 MILE	91
COPP-JACKSON	WISE RIVER	SAWMILL TROUGH	1 EACH	91
		HAPPY CAMP FENCE	.25 MILE	91
JOHNSON CREEK	WISDOM	FENCE CONST/RECONST	2 MILES	91
		CATTLEGUARDS-KV	2 EACH	91
		WATER DEV CONST/RECONST	2 EACH	91
HOWELL CREEK	WISDOM	FENCE CONST/RECONST	3 MILES	91
		WATER DEV CONST/RECONST	1 EACH	91
COX RANCH	WISDOM	LARKSPUR FOLLOWUP	100 ACRES	91
RUBY CREEK	WISDOM	LARKSPUR FOLLOWUP	100 ACRES	91
		FENCE CONST-KV	.5 MILES	91
ROCK-MOOSE	WISDOM	FENCE CONST-KV	.5 MILES	91
TRAIL CREEK	WISDOM	FENCE CONST-KV	2 MILES	91
UPPER RUBY	SHERIDAN	FENCE CONST/RECONST	3 MILES	91
WARM SPRINGS	SHERIDAN	FENCE CONST/RECONST	2 MILES	91
		WATER DEV CONST/RECONST	2 EACH	91
GRANITE CREEK	SHERIDAN	SAGEBRUSH/DF BURN	80 ACRES	91
CLOVER MEADOWS	SHERIDAN	FENCE CONST/RECONST	2 MILES	91
MAVERICK BASIN	SHERIDAN	FENCE CONST/RECONST	2 MILES	91
MT. CAREY	SHERIDAN	FENCE CONST/RECONST	2 MILES	91
BIVENS CREEK	SHERIDAN	FENCE CONST/RECONST	2 MILES	91
		WATER DEV CONST/RECONST	2 EACH	91
LONG CREEK	SHERIDAN	FENCE CONST/RECONST	2 MILES	91
		WATER DEV CONST/RECONST	2 EACH	91
SNOWCREST	SHERIDAN	WATER DEV CONST/RECONST	1 EACH	91
WEST CREEK S&G	SHERIDAN	SAGEBRUSH BURN	100 ACRES	91
MILL CREEK	SHERIDAN	SAGEBRUSH/DF BURN	80 ACRES	91
		WATER DEV CONST/RECONST	2 EACH	91
WISCONSIN-NUGGET	SHERIDAN	SAGEBRUSH/DF BURN	80 ACRES	91
		WATER DEV CONST/RECONST	1 EACH	91
CONKLIN	MADISON	LARKSPUR CONTROL	10 ACRES	91
ELK LAKE S&G	MADISON	WYETHIA CONTROL	50 ACRES	91
NORTH SADDLE	MADISON	FENCE CONST/RECONST.	3 MILES	91
		LARKSPUR CONTROL	20 ACRES	91
		WATER DEV. CONST/RECONST.	3 EACH	91
NORTH MEADOW	MADISON	FENCE CONST/RECONST.	5 MILES	91
		SAGEBRUSH/TREE BURN	100 ACRES	91
		WATER DEV. CONST/RECONST	2 EACH	91
S. MEADOW	MADISON	FENCE CONST/RECONST.	4 MILES	91
		WATER DEV. CONST/RECONST	4 EACH	91
		SAGEBRUSH/TREE BURN	80 ACRES	91
CROCKETT LAKE	MADISON	FENCE CONST/RECONST.	4 MILES	91
		WATER DEV. CONST/RECONST.	3 EACH	91

APPENDIX S

Five Year Schedule
TRAIL CONSTRUCTION/RECONSTRUCTION PROJECTS

District	Project Name/Location	Type	Miles	Year
Wisdom	Hell-Roaring (Anaconda-Pintlar Wilderness)	Reconstruction	6.0	86
Madison	Indian Creek (Lee Metcalf Wilderness)	Reconstruction	0.8	86
Sheridan	West Fork (Snowcrest)	Reconstruction	2.0	86
Madison	Bear Creek/Trail Fork (Lee Metcalf Wilderness)	Reconstruction	3.5	87
Madison	Bear Creek/Middle Fork (Lee Metcalf Wilderness)	Reconstruction	1.5	87
Dillon	Gorge Lake (East Pioneers Wilderness)	Reconstruction	3.0	87
Wise River	Pioneer Loop (West Pioneers)	Reconstruction	5.0	87
Wisdom	Hamby Creek (West Big Hole Wilderness)	Reconstruction	2.5	87
Dillon	Continental Divide	New Construction and reconstruction	100.0	87
Madison	Indian Creek (Lee Metcalf Wilderness)	Reconstruction	2.0	87
Dillon	Brays Canyon (Big Hole Divide)	Reconstruction	1.0	88
Wise River	David Creek (East Pioneers Wilderness)	Reconstruction	3.5	88
Sheridan	Ledford Creek (Snowcrest)	Reconstruction	1.0	88
Wisdom	Little Lake Creek (West Big Hole Wilderness)	Reconstruction	3.5	88
Wisdom	Continental Divide	New construction and reconstruction	52.0	88
Sheridan	White Bear Creek (Greenhorn Mtns.)	Reconstruction	4.5	89
Dillon	Little Sheep Creek (Lima Planning Unit)	Reconstruction	0.2	89
Dillon	Tent Lake (East Pioneers)	Reconstruction	1.2	89

District	Project Name/Location	Type	Miles	Year
Madison	Table Mtn (Gravelly Planning Unit)	Reconstruction	4.0	89
Sheridan	Romy Creek (Snowcrest)	Reconstruction	2.0	89
Wise River	Continental Divide	Reconstruction	12.0	89
Sheridan	Beaver Creek (Snowcrest)	Reconstruction	2.0	90
Sheridan	Snowcrest Divide (Snowcrest)	Reconstruction	0.2	90
Dillon	Clark Creek (East Pioneers)	Reconstruction	0.3	90
Dillon	Long Branch (East Pioneers)	Reroute	1.5	90
Dillon	Continental Divide	New construction and reconstruction	15.0	90
Wisdom	Continental Divide	New construction and reconstruction	20.0	90